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VULCANIZERS

AND
APPURTENANCES



Catalog C, 1908

BUFFALO DENTAL MANUFACTURING CO.

587-589 Main Street, corner Chippewa,
BUFFALO, N. Y., U. S. A.

Buffalo Dental Mfg. Co.'s Dental Vulcanizers

The Buffalo Dental Manufacturing Co. are the successors of Drs. Hayes and Whitney, the inventors of the two types of vulcanizers so widely known and used by dentists for many years. The Whitney and Hayes Vulcanizers are still made by the present Company, but in a greatly improved form.

The Lewis Cross-Bar Vulcanizer, a later device, having a drop-forged steel cross-bar, and a drop-forged steel cap, with a center bearing, has proved to be the safest and most convenient of any vulcanizer manufactured by us.

Attention is called to the accessories provided with each vulcanizer, either to insure durability or safety, or for convenience, among which are the following:

The Hayes Mercury Bath, which protects the thermometer from the action of the steam; as steam, if allowed to come in contact with the glass, soon corrodes it and destroys the bulb of the thermometer.

The Safety Apparatus, containing a thin metal disk which will give way under an excessive pressure of steam, and, by allowing its escape, will prevent an explosion.

The Blow-off, by which the air can be expelled from the vulcanizer, and its interference with the indications of the thermometer prevented.

The Lewis Manifold, for the convenience of mounting the safety apparatus, blow-off and gas regulator.

The Buffalo Dental Manufacturing Co. have been engaged in the manufacture of vulcanizers for over forty years, and can refer to their long experience, the high standard of workmanship and rigid inspection as a guaranty that their vulcanizers and appurtenances are the best which can be procured.

**Buffalo
Dental
Manufacturing
Company.**

List of
VULCANIZERS
AND THEIR
APPURTENANCES

FOR

Dental Laboratories
and Colleges

1908



PRICES IN FORMER CATALOGS ARE HEREBY CANCELLED.

BUFFALO DENTAL MANUFACTURING CO.

Original Manufacturers of Dental Vulcanizers

587-589 Main Street, corner Chippewa,

BUFFALO, N. Y., U. S. A.



PRESS OF
THE BUFFALO COMMERCIAL.
BUFFALO, N. Y.

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DENTAL VULCANIZERS.

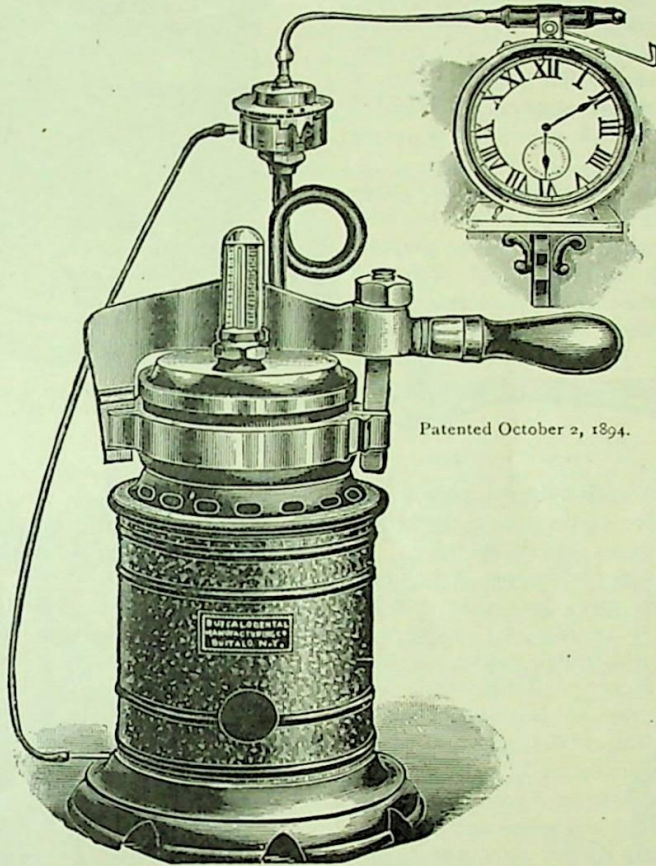
THE Lewis Cross-Bar Vulcanizer embodies improvements suggested by many years of experience, both in handling and in manufacturing, and we have no hesitation in recommending it as the strongest, safest, most reliable and convenient vulcanizer on the market.

The Pot is made from copper rolled expressly for our vulcanizers, is of unusual thickness, and is subjected to most careful inspection.

The Cap is a drop-forging of steel, and is the strongest and safest cap ever placed on a vulcanizer. This cap has but two holes drilled in it; one for the Mercury Bath, to which the

The Lewis Cross-Bar Vulcanizer.

Drop-Forged Steel Cross-Bar and Cap.



LEWIS CROSS-BAR VULCANIZER WITH GAS HEATING APPARATUS AND LEWIS GAS AND TIME REGULATOR.

Thermometer is attached; the other for the insertion of the Lewis Manifold, which carries the Safety Valve, Blow-off and Gas Regulator.

The Ring that surrounds the pot is of malleable iron and is of ample strength. Besides the lugs for taking the strain of the cross-bar and bolt, it has a dove-tailed projection for the insertion of a lifting handle. It will be observed that when the cross-bar and cap are removed, there are no swinging bolts or attachments to the pot.



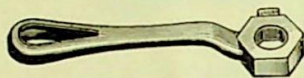
NO. 20. POT LIFTER.

The Cross-Bar is drop-forged steel of an improved form. One end is at right angles to the main bar and terminated by projections that catch under the lugs on the ring. Over the projections is a small rib which prevents the bar from dropping out of position, these two projec-

tions, in fact, forming a hinge guide. The other end of the cross-bar has an enlarged portion for the reception of the bolt, and is terminated by a handle.

The Lewis Vulcanizer is closed by one bolt suspended in a slot on the hand-end of the cross-bar. The bolt is squared to prevent rotation, and is surrounded by a spring for the purpose of disengaging it from the lugs when the nut is slackened off, and for always retaining the bolt perpendicularly, and forcing it in place automatically. It is not necessary to adjust the bolt in the lug, as the action of adjusting the cross-bar causes the bolt to assume its proper position.

To open the Lewis Cross-Bar Vulcanizer, slack off the nut on the bolt with the wrench furnished for the purpose. The bolt will be forced downward through the action of the spring. Seize the handle of the cross-bar, and with



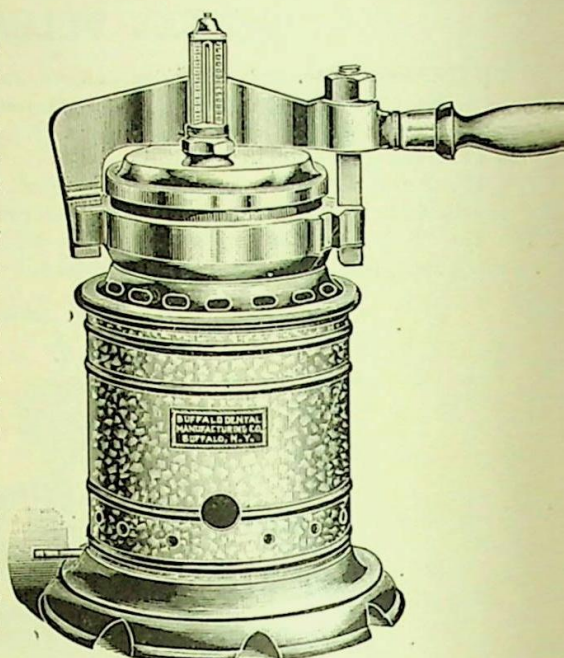
NO. 21. CROSS-BAR WRENCH.

the thumb against the nut, press it until the bottom of the bolt is disengaged from the lugs; then lift the bar.

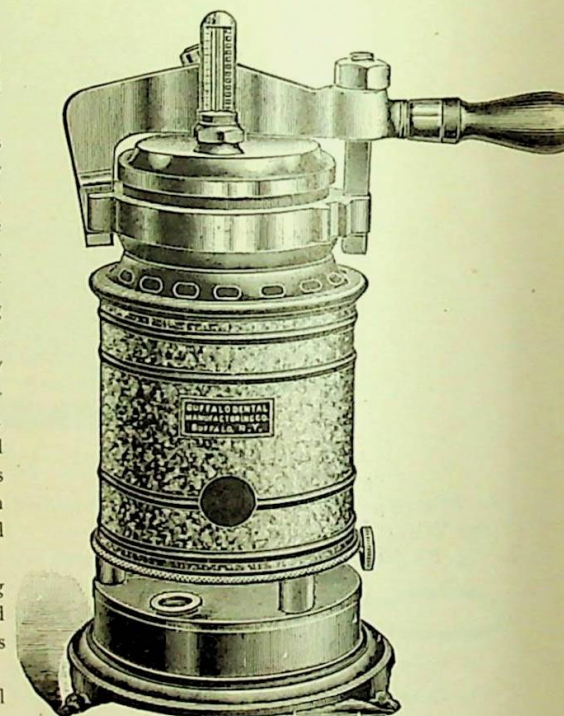
Among the advantages of the Lewis Vulcanizer over others of the cross-bar pattern, is the ease and facility with which it is opened or closed, the entire absence of any projecting bolts or handles after the cover is removed, the automatic locking of the bar, and the closing of the vulcanizer with only one bolt. The new Heating Apparatus expressly designed for this vulcanizer, is a combination of jacket, stand and burner. It is much more substantial than the old form of heating apparatus. The gas burner is entirely new in its construction and produces an intense heat. It will not "light back."

Always order with Lewis Heating Apparatus, as it is rightly proportioned to give best results, and other heaters may not fit properly.

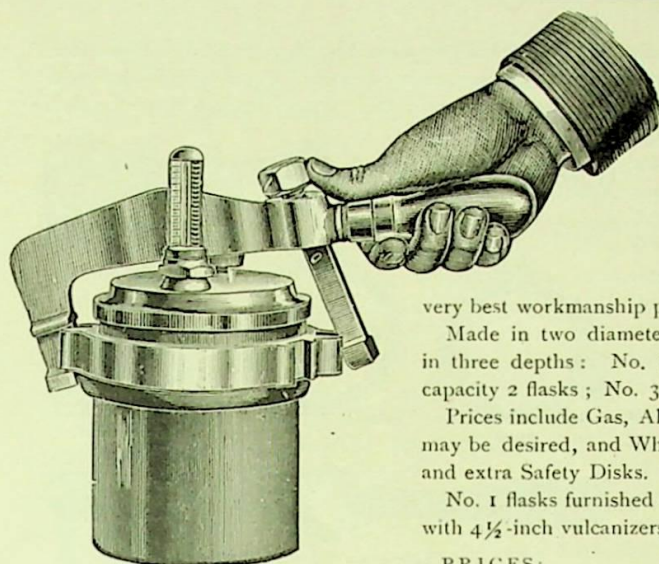
This vulcanizer is equipped with all modern accessories, viz.: Hayes Mercury Bath, Safety Valve, Blow-off, and



LEWIS CROSS-BAR VULCANIZER WITH GAS HEATING APPARATUS.



LEWIS CROSS-BAR VULCANIZER WITH KEROSENE HEATING APPARATUS.



Lewis Manifold, and is of sufficient depth to admit the Donham springs.

Nos. 2 and 3 are of sufficient depth to admit the Turk Spring-Clamps.

All steel and brass parts are nickel-plated and the entire vulcanizer is of the

very best workmanship possible.

Made in two diameters, 4-inch and 4½-inch, and in three depths: No. 1, capacity 1 flask; No. 2, capacity 2 flasks; No. 3, capacity 3 flasks.

Prices include Gas, Alcohol or Kerosene Heater, as may be desired, and Whitney Iron Flasks, Wrenches and extra Safety Disks.

No. 1 flasks furnished with 4-inch and No. 18 flasks with 4½-inch vulcanizers.

PRICES:

	4-inch.	4½-inch.
No. 1 Lewis Cross-Bar Vulcanizer, for one flask, complete, . . .	\$16.00	\$18.00
No. 2 Lewis Cross-Bar Vulcanizer, for two flasks, complete, . . .	18.00	20.00
No. 3 Lewis Cross-Bar Vulcanizer, for three flasks, complete, . . .	20.00	22.00

If less heating apparatus, deduct \$1.00. If less flasks, deduct 80 cents each.

Kerosene Heating Apparatus will always be furnished with Lewis Vulcanizers unless gas or alcohol is specified.

THE Whitney Vulcanizer was invented by the late Dr. B. T. Whitney over forty years ago.

It consists of a copper pot, four inches in diameter, on which a brass head is screwed; a steam-tight joint being made by means of a rubber packing in the head, which bears upon the edge of the pot. The pressure is thus brought evenly upon the parts, the screw-thread supporting the pot and preventing it from being drawn out of true.

Hayes' Mercury Bath is applied to this vulcanizer, the bulb of the thermometer being immersed therein and thereby protected from the destructive action of the steam upon it. The B. D. M. Co.'s Safety Apparatus is also applied to this vulcanizer. This gives way and allows the escape of steam, if the temperature of the vulcanizer should, by forgetfulness or oversight, rise to a dangerous extent. Experiments have shown a variation of as much as twenty

degrees in the temperature as indicated by the thermometer, depending upon the presence or absence of air in the vulcanizer; the mixture of air and steam not allowing the heat to pass freely through it to the thermometer. A Blow-off Valve has, therefore, been added, by means of which the air can be expelled from the vulcanizer while it is heating up. These two adjuncts are mounted on the Lewis Manifold.

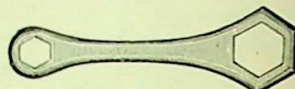
The Whitney Vulcanizer.



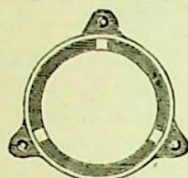
The Whitney Vulcanizer is closed by means of two wrenches, Nos. 3 and 8. These form the most convenient means for the purpose of the traveling dentist. For those having a regularly appointed laboratory, the bed-plate and wrench, Nos. 9 and 10, are recommended. The bed-plate is fixed to the bench, in which a hole is cut for the reception of the vulcanizer pot. These are furnished with the vulcanizer instead of the round and straight wrenches, Nos. 3 and 8, without any advance in price. If a hole in the bench is not practicable, the Overhanging Bed-plate, No. 19, which is illustrated on another page, will be furnished at an advance in price of 50 cents. The No. 17A Flask Wrench answers to close the flasks and the blow-off and safety valve.



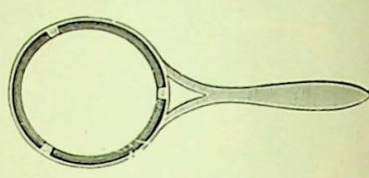
NO. 17A. FLASK WRENCH.



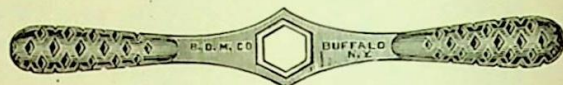
NO. 3 WHITNEY STRAIGHT WRENCH.



NO. 9. BED PLATE.



NO. 8. WHITNEY ROUND WRENCH.



NO. 10. IMPROVED BED-PLATE WRENCH FOR WHITNEY VULCANIZERS.

The heat is supplied by either gas, alcohol or kerosene. Full descriptions and cuts of the different forms of heating apparatus will be found on another page. For kerosene, a special pattern of stove is used, which is supplied at the same price as gas or alcohol heating apparatus. It has a 4-inch wick and will be found an efficient heater, much preferable to those heretofore used. This stove will always be furnished with this vulcanizer, unless other heating apparatus is specified. Prices include No. 1 Whitney Flasks, Wrenches and Heating Apparatus.

The numbers of vulcanizers indicate their capacity in flasks.

PRICES :

- No. 1. Whitney Vulcanizer, 4-inch for one flask, gas, alcohol or kerosene, . \$14.00
- No. 2. Whitney Vulcanizer, 4-inch for two flasks, gas, alcohol or kerosene, . 16.00
- No. 3. Whitney Vulcanizer, 4-inch for three flasks, gas, alcohol or kerosene, 18.00

If less heating apparatus, deduct \$1.00.

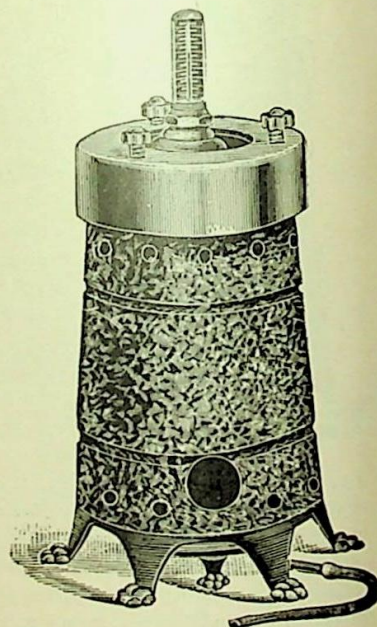
If less flasks, deduct 80 cents.

The Hayes Vulcanizer.

THE Hayes Copper Boiler consists of a copper pot four inches in diameter, a cover containing a packing-joint, and a collar, which screws upon a threaded ring which encircles the pot and bears upon the cover to tighten the joint by means of three set screws, which are plainly shown in the engraving. This fastening has proved to be very substantial.

The Iron Clad Boiler is made precisely like the copper boiler above described, excepting that the copper pot is covered by a shell of malleable iron strong enough to withstand many times the pressure of steam used in vulcanizing. It may, therefore, be safely used, notwithstanding the weakening of the copper by corrosion. Hayes Vulcanizers are only made four inches diameter.

The thermometer bulb is immersed in Hayes Mercury Bath, by which it is perfectly protected from the corrosive action of the steam.



The B. D. M. Co.'s Safety Apparatus and a Blow-off Valve form part of the equipment of the Hayes Vulcanizers, and are mounted on the Lewis Manifold.

The Safety Apparatus contains a thin metal disk, which will give way if the steam pressure is allowed to rise very far above the vulcanizing point. The blow-off valve should be opened, and the air expelled from the vulcanizer while it is heating. Experiments have demonstrated the *absolute necessity* for taking this precaution, to insure uniform indications from the thermometer.

The Flask Wrench, No. 17 A, here illustrated, answers for closing the Hayes Vulcanizer and the flasks, and operating the Safety Valve and Blow-off.

Either gas, alcohol or kerosene heating apparatus is furnished as required. They are illustrated on another page. Kerosene Heating Apparatus is always furnished with these vulcanizers unless other heating apparatus is specified.

Prices include two No. 1 Whitney Flasks, Wrench and Heating Apparatus.

PRICES:

No. 2.	Hayes Vulcanizer, copper, for two flasks, complete,	\$16.00
No. 2.	Hayes Vulcanizer, iron-clad, for two flasks, complete,	17.00

If less heating apparatus, deduct \$1.00. If less flasks, deduct 80 cents each.

IN using vulcanizers, many make the mistake of applying black-lead or soap-stone too frequently to the packing-joint. The only office performed by these substances is to prevent the packing from sticking to the edge of the pot. If they are applied too often, they form a porous coating on the packing, and leakage is inevitable. If the vulcanizer has a screw-thread fastening, like the Whitney, either of these powders, if applied in excess, will get on the screw-threads and soon wear them out. Vulcanizers are often seriously damaged in this manner. As a rule, the less tinkering the packing-joint receives, the better. In every instance keep the top edge of the vulcanizer pot CLEAN AND SMOOTH. Do not allow an accumulation of plaster or dirt on the joint. Vulcanizer caps can often be prevented from sticking to the pot by moistening the edge of the pot with water before screwing down.

Care of the Packing-Joint.

THIS Vulcanizer has a screw-press attached to and forming a part of the cover. Between the screw and the presser-foot, which bears upon the flasks, is a heavy spiral spring, which equalizes the pressure, and follows up the flasks as they close.

The flasks, being packed in the usual way, are placed in the vulcanizer, which is then closed and heat applied; the screw being run down in the meantime until its bearing upon the flasks is felt. When the thermometer indicates 260°, or thereabouts, the screw should again be turned down about three-quarters of an inch, or until a sufficient pressure is obtained to insure the proper closing of the flasks. The gentle and continuous pressure of the spring will close the flasks perfectly, while the breaking of blocks and other effects of over-pressure will be avoided.

It will be observed that this apparatus gives the dentist complete control of the time for closing the flask. It is, therefore, superior to the spring clamps, which must be operated before they are put in the vulcanizer.

The Crane Flask-Closing Vulcanizer.

The Lewis Heating Apparatus is furnished with this vulcanizer when ordered for gas. The top ring and the base are bolted to the steel jacket to prevent rotation, the base being provided with holes so that it can be securely screwed to the work-bench. Special flasks (shown on another page) with long guide pins, but without bolts, are furnished. The illustration shows the vulcanizer as rigged for gas.

The Heating Apparatus for Kerosene for this vulcanizer combines the bed-plate and stove. The vulcanizer is placed in it when the cover is to be screwed on, and is not removed until the plate is vulcanized. The screw for closing the flasks is operated at the proper time without any liability of moving the vulcanizer.

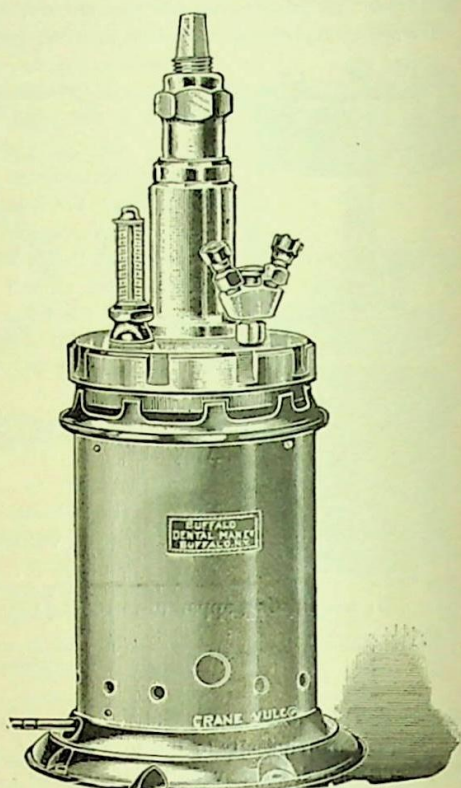
The Heating Apparatus is illustrated on another page.

The Pot of this vulcanizer is $4\frac{3}{8}$ inches diameter. It is made of extra heavy copper, with a cast gun-metal bottom. The whole machine is made with special regard to strength and durability.

Price includes two Crane Flasks, Wrenches and Heating Apparatus.

Kerosene Heating Apparatus will always be furnished unless gas or alcohol is specified.

Crane Vulcanizers are made in only one size, capacity two flasks.

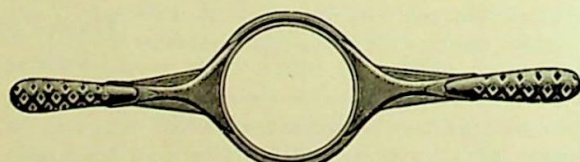


Patented August 27, 1889.

PRICE:

Crane Vulcanizer, for two flasks, complete, \$30.00

WRENCHES USED ON CRANE VULCANIZER.



NO. 1. CAP WRENCH.



NO. 18. PIN WRENCH.



NO. 19 B. SPANNER.



NO. 11. TOP WRENCH.



NO. 4. STUFFING-BOX WRENCH.



NO. 17 A. SAFETY VALVE AND BLOW-OFF WRENCH.

THIS Vulcanizer has the same pot and cover fastening as the Whitney—a simple screw thread, which has proved itself to be, all things considered, one of the most satisfactory fastenings in use for this class of vulcanizers.

The Edson Flask-Closing Vulcanizer and Celluloid Apparatus.

The flasks are closed inside the boiler after steam has been generated therein, by means of a screw and cross-bar, which operate a clamping apparatus. The dentist is thus enabled to choose his time to close the flasks, and to take advantage of the greater softness of the rubber consequent upon the higher temperature it is exposed to in the vulcanizer. This apparatus is provided with a Mercury Bath Thermometer; also the B. D. M. Co.'s Safety Apparatus, and the Blow-off Valve, mounted on a Lewis Manifold.

The clamping apparatus has been remodeled and strengthened, and the lower end of the screw is now attached to the boiler-head by a cap-nut, so that the clamping apparatus can be either closed or opened by turning the screw.

Inside diameter of pot, $4\frac{1}{2}$ inches.

The Lewis Heating Apparatus is furnished with this vulcanizer when ordered for gas. The top ring and base are bolted to the steel jacket to prevent rotation, the base being provided with holes so that it can be securely screwed to the work-bench.

When furnished for alcohol a two-burner lamp of increased capacity is provided.

Our Combined Bed-Plate and Kerosene Heating Apparatus, as illustrated on another page,

is furnished with the Edson Vulcanizer, unless either gas or alcohol is specified.

Price includes one each Nos. 6 and 6A Malleable Iron Flasks, Wrenches and Heating Apparatus.

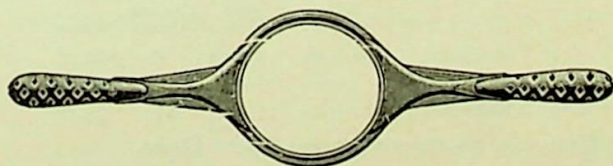
This Vulcanizer is made in one size only, capacity two flasks.

Full instructions for working rubber and celluloid with the Edson Vulcanizer accompany each apparatus.

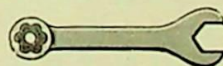
PRICE:

Edson Flask-Closing Vulcanizer and Celluloid Apparatus, for two flasks,
complete, \$30.00

WRENCHES USED ON EDSON VULCANIZERS.



NO. 1. CAP WRENCH.



NO. 14. EDSON STUFFING-BOX WRENCH.



NO. 11. TOP WRENCH.

**B. D. M. Co.
College and
Dental Laboratory
Vulcanizer.**

THE Vulcanizer Pot is heavy wrought iron, to which is fitted a cast iron ring, carrying the stud-bolts for securing the cover.

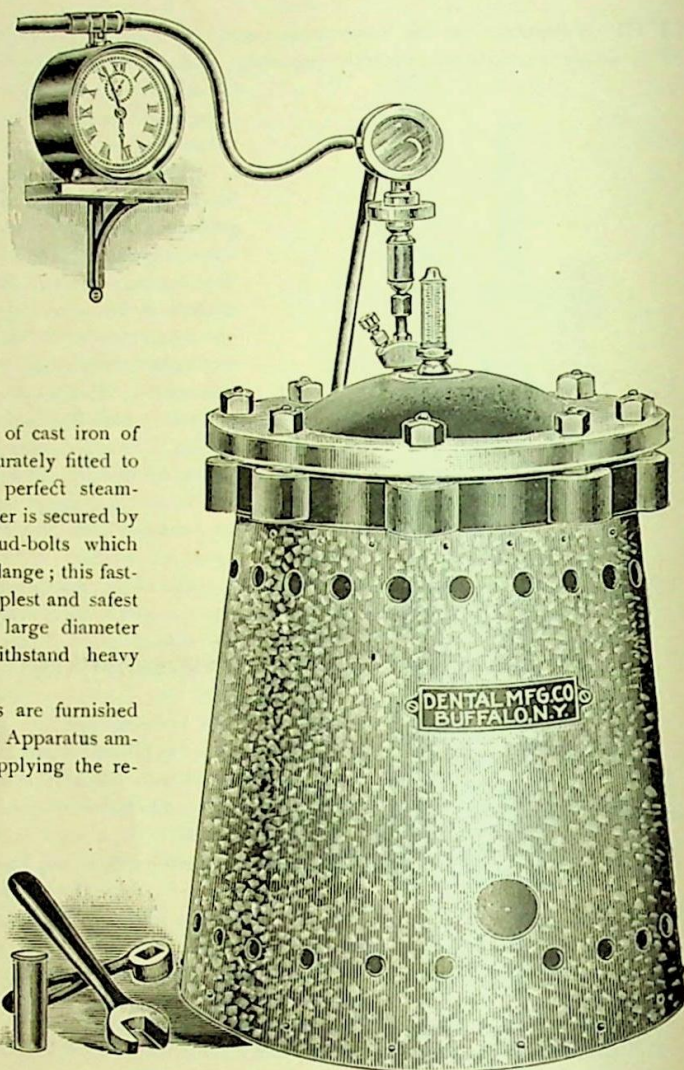
The cover is also of cast iron of ample strength, accurately fitted to the pot to make a perfect steam-tight joint. The cover is secured by nuts that fit the stud-bolts which project through the flange; this fastening being the simplest and safest for a vulcanizer of large diameter and intended to withstand heavy steam pressure.

These Vulcanizers are furnished with a Gas Heating Apparatus amply powerful for supplying the required heat.

The prices given include Thermometer, Wrench, Safety Apparatus and Blow-off Valve, mounted on Lewis Manifold and Heating Apparatus, but not Flasks.

These Vulcanizers are extensively used in Dental Colleges and large dental laboratories; also for vulcanizing rubber stamps, type wheels for type-writing machines and other small rubber appliances.

The No. 2 Gas Regulator shown in illustration passes a larger quantity of gas than the No. 4, and is expressly made for use in connection with large vulcanizers. It is fully described on a following page.



PRICES:

		Diam. inside.	Deep inside.	Capacity Flasks	Price
No. 6.	B. D. M. Co.'s College Vulcanizer, . .	6-inch	11-inch	8	\$54.00
No. 8.	B. D. M. Co.'s College Vulcanizer, . .	8-inch	11-inch	12	60.00
No. 10.	B. D. M. Co.'s College Vulcanizer, . .	10-inch	11-inch	16	73.00

Prices include Gas Heater and necessary Wrenches, but no Flasks.

No. 2. Gas and Time Regulator, with Brass Siphon as shown, extra, . . \$16.75

GAS REGULATORS.

FOR DENTAL VULCANIZERS.—Gas Regulators for Dental Vulcanizers have been in use for many years, and have received the highest possible commendation from those using them.

Nos. 4 and 4A.

Lewis

Graduated

Gas Regulator.

They wholly relieve the operator from all care or anxiety about vulcanizing, leaving him free to attend to patients, or to leave the office for an unlimited time, if he so desires.

The Gas Regulator holds the temperature of the vulcanizer at the proper point, and the Time Regulator shuts off the gas at the proper time. Adjustment is easily made for a higher or lower temperature, or for a longer or shorter time, so that as complete control is had of the vulcanizing process as would be possible by the most careful attention, without the necessity of any oversight by the operator after the proper adjustments are made, and the gas under the vulcanizer lighted. Owing to the extreme regularity of the heat, better results are obtained in vulcanizing than by the usual methods. In a word, no dentist who uses gas for vulcanizing can afford to be without a gas regulator if he values his time, comfort or safety.

The Buffalo Dental Manufacturing Co. have from time to time brought out several successful gas regulators, and from the experience gained in this special line of goods, have been enabled to produce a gas regulator that is believed to be superior in every way to any heretofore constructed.

The No. 4 Lewis Graduated Gas Regulator, while resembling in outward appearance other regulators heretofore manufactured by us, is, in its essential points, entirely different from them, and it has proved to be a remarkably perfect and reliable regulator.

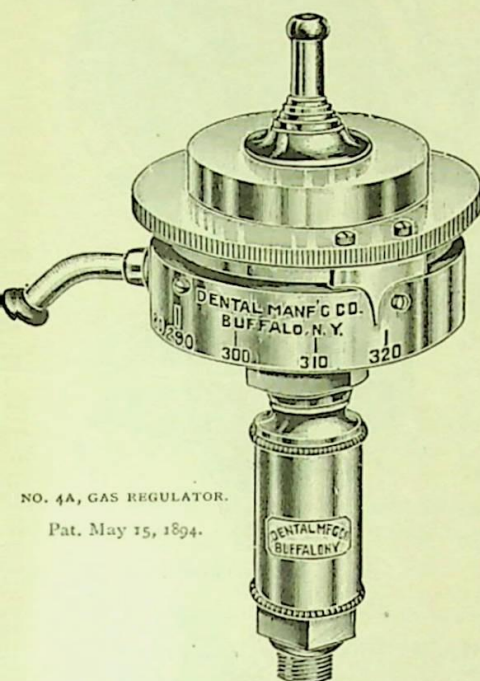
This regulator is capable of being set to temperatures varying from 280° to 320°. To vulcanize at any of the degrees of temperature marked on the graduated base, all that is required is to turn the milled hand-plate till the pointer is over the degree desired. This can be done either before or after lighting the gas under the vulcanizer.

A small screw is inserted in the base, which acts as a stop for the pointer, and prevents the regulator from being set, either by design or accident, to maintain a higher temperature than the highest graduation on the base, thereby endangering the safety of the vulcanizer.

The regulator requires no special adjustment after leaving the factory.

As regularly supplied the Lewis Gas Regulator is mounted upon an iron coil pipe and is designated No. 4. See page 3.

The above illustration shows it mounted upon our No. 2 Brass N. P. Siphon, which overcomes some objectionable features found in the iron pipe siphon. When so mounted the Regulator is designated No. 4A. See No. 2 Improved Siphon on another page.



NO. 4A, GAS REGULATOR.

Pat. May 15, 1894.

PRICES:

Lewis Graduated Gas Regulator No. 4, with iron coil pipe, \$4.50

Lewis Graduated Gas Regulator No. 4A, with No. 2 Brass Siphon, 5.75

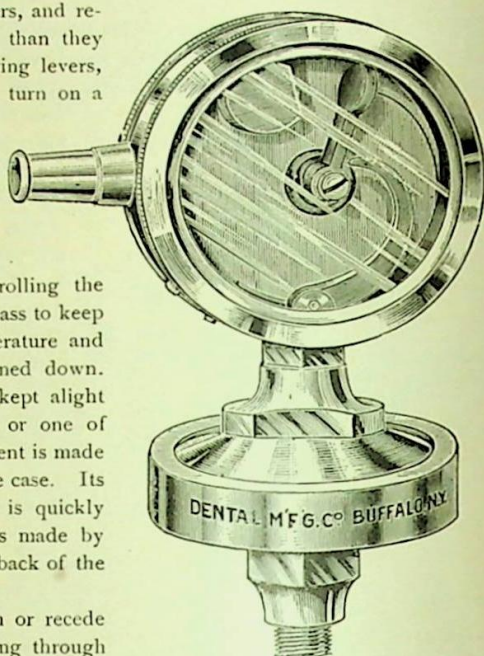
**Coolidge
Gas Regulator
No. 2.**

THIS form of the Coolidge Gas Regulator is intended especially for use with any style of vulcanizer which exceeds the dimensions of the Lewis, Whitney or Hayes Vulcanizers, and requiring a larger gas supply than they do. By the use of multiplying levers,

the valve is moved so quickly that it will turn on a full flow of gas if the pressure drops but two or three pounds. It will operate equally well whether a large or small quantity of gas is used, and is applicable to the Lewis, Whitney or Hayes Vulcanizers.

It has a special adjustment for controlling the amount of gas which must be allowed to pass to keep the burner alight when the desired temperature and pressure are attained and the gas is turned down. By this adjustment, the burner may be kept alight whether it be a small laboratory Bunsen or one of three or four times the size. This adjustment is made by turning a small screw at the back of the case. Its adjustment for temperature and pressure is quickly comprehended and easily operated. It is made by turning the milled plate which forms the back of the casing.

This causes the valve-seat to approach or recede from the valve, as will be seen by looking through the glass front.



NO. 2. GAS REGULATOR.

PRICES:

Coolidge Gas Regulator No. 2, without Time Regulator, with Iron Syphon,	\$10.00
With No. 2 Brass Syphon, extra,	1.25
Coolidge Gas Regulator No. 2, with No. 2 Time Regulator,	15.50

**B. D. M. Co.'s
Time
Regulator.**

IN the Time Regulator as in the Gas Regulator, the use of rubber in any form, excepting as connecting tubing, has been entirely discarded, as experience has proved that substance to be very prone to deterioration from a variety of causes. It has a metallic valve which is gas tight, whether it be open or closed, which will be found to operate with ease and certainty. The timing device is operated by the minute arbor of the clock, and is capable of very delicate adjustment as to time, its variations being limited by seconds instead of by minutes.

The No. 1 Time Regulator is used in connection with Gas Regulator No. 4. No. 2 Time Regulator is used with Gas Regulator No. 2.

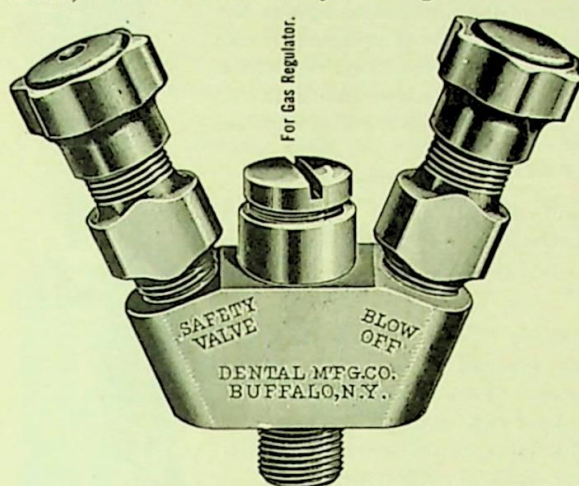


PRICES:

No. 1. B. D. M. Co.'s Time Regulator,	\$4.00
No. 2. B. D. M. Co.'s Time Regulator,	5.50

FOR DENTAL VULCANIZERS.—This device is made to carry the blow-off, safety valve and gas regulator—as used on dental vulcanizers—all in one fixture, and obviates the necessity of drilling two or more holes in the vulcanizer

**Lewis
Manifold.**



cap for the insertion of these adjuncts.

The center opening is for convenience of attaching a gas regulator. This is done by removing the cap screw and screwing the coiled pipe connection, or Syphon No. 2, in its place.

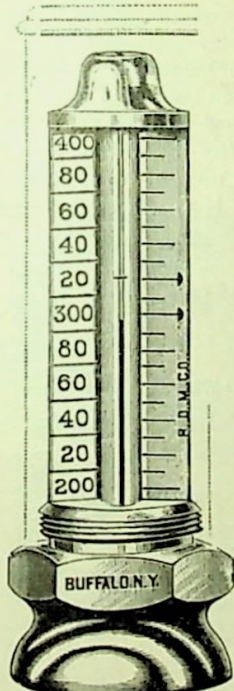
The Manifold is a great convenience for those having the old style of vulcanizers—with one hole in the cap—and desiring all the latest attachments, as it can be easily screwed into the cap without the necessity of drilling additional holes.

It is plainly stamped "Safety Valve" and "Blow-off," thus

avoiding confusion between these two attachments. In ordering, state whether for a Whitney, Hayes or Lewis Cross-Bar Vulcanizer.

PRICES:

Lewis Manifold only, without Safety Valve or Blow-off,	\$1.50
Lewis Manifold, complete, with Safety Valve and Blow-off,	3.25



B. D. M. CO.'S MERCURY
BATH THERMOMETER
AND IMPROVED INSIDE
THERMOMETER CASE.

FOR DENTAL VULCANIZERS.—The annexed cut shows the Mercury Bath Thermometer—full size—that is placed on all vulcanizers of our make. As so much depends on a reliable thermometer, parties purchasing vulcanizers should see that the genuine B. D. M. Co.'s Red Stripe Thermometer is placed on each machine.

The great quantity of unreliable thermometer tubes furnished by different parties induced an investigation to ascertain, if possible, the causes of their failure, and we are glad to say it has resulted in an improvement both in the quality of material used and the manner of production; and, as a mark of distinction to protect the trade and the dental profession from imposition, we have caused a trade-mark to be registered in the Patent Office. This consists of a RED STRIPE EXTENDING ALONG THE BACK OF THE WHITE GROUND commonly employed in the thermometer tubes. It is formed in the tubes in the same manner as the white ground itself.

All of our tubes have this mark in the glass, and all the scales have the initials B. D. M. Co. stamped on the face. Without each of these, any tubes may be declared spurious, and probably worthless. Any imitation of these tubes will be in violation of law, and all imitators of them will be held responsible.

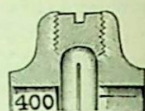
We often receive applications for thermometer tubes without scales, the dentist evidently supposing that any tube will fit the old scale. This is a mistake. The position of the 320° point and the distance between it and the 212° point vary in different tubes. Each

**Mercury
Bath Ther-
mometers.**

Trade-mark Registered
U. S. Patent Office.
A red stripe in the
white ground.

scale must, therefore, be especially fitted for its tube, and care should be exercised that they be not separated. Orders for thermometer tubes without scales will not be filled.

Provision is made on the improved Thermometer Case—herewith illustrated—for the correct adjustment of the thermometer tube to the indications on the scale, in case the scale should not be accurately cut. By turning the screw on the top of the inside thermometer case with a screw driver, the thermometer tube can be raised or lowered as required, till the black mark on the tube and the 320° mark on the scale coincide.



ADJUSTMENT
FOR TUBES.

PRICES:

Mercury Bath Thermometer and Case, complete,	\$1.75
B. D. M. Co.'s Red Stripe Thermometer Tube and Scale,	.60

**No. 2.
Improved
Siphon.**

FOR GAS REGULATORS NOS. 2 AND 4.—Gas Regulators are usually mounted on iron coil pipe, that are liable to become closed by rust, which often prevents the proper operation of the regulator.

We have perfected a Siphon that is in every way reliable, presents no objectionable features, and will not corrode.

It is made entirely of brass, polished and nickel plated.

This Siphon is threaded for mounting Gas Regulators Nos. 2 and 4.

PRICE:

Brass Siphon, No. 2, nickel plated,	\$1.25
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FULL SIZE.

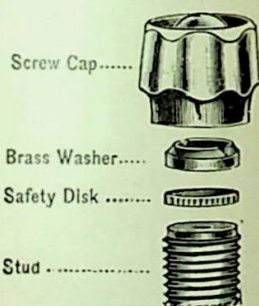
**B. D. M. Co.'s
Improved
Safety
Apparatus.**

FOR THE PREVENTION OF VULCANIZER EXPLOSIONS.—This apparatus consists of a thin metal disk, which is retained on the face of a hollow stud by means of a screw-cap. If the vulcanizer is neglected and the steam pressure is allowed to rise so as to be dangerous, the safety disk will be blown out, and the pressure will be relieved. If it becomes necessary to renew the disk in consequence of the original one giving way, it is sometimes the case

that the face of the stud will be found to be out of true, either by reason of careless usage, or from the formation of a deposit upon it. In this case, the new disk is sometimes unable to adapt itself to the uneven surface, and will then give annoyance by giving way at too low a pressure. To prevent this, care should be taken to remove all deposit and uneven surfaces on the top of the stud before mounting the disk. The engraving shows the manner in which the disk and washer are applied.

Dentists are earnestly dissuaded from tampering with the Safety Apparatus in any way calculated to prevent its operation. It is a safeguard against an explosion, which, if it occurs, cannot fail to do damage to property, and may cost the bystander his life.

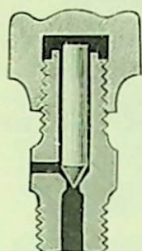
We have never known of a vulcanizer explosion when it could not have been shown by investigation that the Safety Apparatus had been put out of order, either ignorantly or by design. The genuine "B. D. M. Co.'s" Safety Disks are manufactured only by the Buffalo Dental Manufacturing Co.



PRICES:

Safety Apparatus, with package of disks,	\$1.00
Safety Disks, per package,	.25

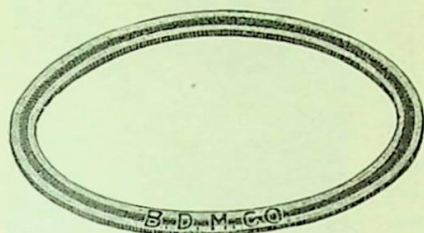
IT having been demonstrated that the entire expulsion of air from the vulcanizer forms a necessary condition for attaining the proper indication of the thermometer, we have, since January 1, 1887, provided each vulcanizer which has left our hands with a Blow-off Valve. This should be opened when heat is applied to the vulcanizer, and allowed to remain open until there has been a free escape of steam for two or three minutes. The air passes out with the escaping steam, and an atmosphere of pure steam in the vulcanizer is secured. The thermometer, under this condition, will always show the same temperature for a certain steam pressure. A variation between the indications of the steam gauge or graduated gas regulator and thermometer of as much as 20° has been noticed when the air was allowed to remain in the vulcanizer.



B. D. M. Co.'s Blow-off Valve.

PRICE:

B. D. M. Co.'s Blow-off Valve, 75 cents.



THE packing for the Lewis or Hayes Vulcanizer is cut from specially prepared stock, and the best that can be procured. The endless packing for the Whitney Vulcanizer is equal in quality and similar in structure to the packing strips formerly used by us. These are a good, reliable article.

Vulcanizer Packing.

PRICES:

Endless Packing for the Hayes or Lewis 4-inch Vulcanizer, each, \$0.10
Endless Packing for the Hayes or Lewis 4½-inch Vulcanizer, each,15
Endless Packing for the Whitney 4-inch Vulcanizer, each,08
Endless Packing for the Whitney 4½ inch, Crane or Edson Vulcanizer, each, .08
Strip Packing for the Whitney 4-inch Vulcanizer, each,05
Edson Stuffing-Box Packing, per set,10



Does Your Vulcanizer Leak?

KEEP the edge of the pot smooth and free of dents. Renew packing frequently, it is inexpensive and can be quickly inserted. Don't allow it to become hard or uneven.

When new, coat lightly with B. D. M. Co.'s Powdered Soapstone, or B. D. M. Co.'s Powdered Plumbago to prevent sticking.

PRICES:

B. D. M. Co.'s Powdered Soapstone, per can, \$0.10
B. D. M. Co.'s Powdered Plumbago, per can,10
Postage, 3 cents extra.

DENTAL FLASKS.

THE Buffalo Dental Manufacturing Co.'s Dental Flasks are the best and smoothest of iron or brass castings, well fitted and of ample strength. In variety of form they meet every requirement of the platerworker. The cuts give a good idea of their appearance and construction, and their inside dimensions in inches are also given. The measurements are given in the following order: 1st, from front to back; 2d, from side to side; 3d, height.

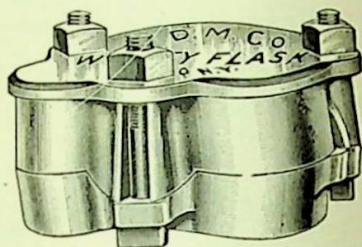
No. 1. Whitney Flask.

SHALLOW BOTTOM AND SHALLOW RING.—This is the flask usually furnished with four-inch Vulcanizers. The bolts pass through lugs on the lower section and holes in the cover, and receive nuts, by which the flask is closed.

Size, $2\frac{3}{8} \times 3\frac{1}{8} \times 1\frac{7}{8}$.

PRICES:

Brass,	\$1.50
Malleable Iron,	.80



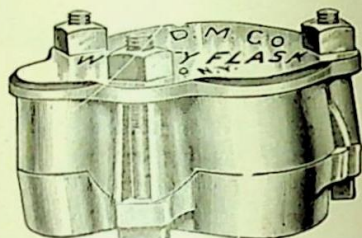
No. 2. Whitney Flask.

SHALLOW BOTTOM AND DEEP RING.—This Flask differs from the No. 1, by having a deep ring, which is very desirable in flasking cases with long teeth.

Size, $2\frac{3}{8} \times 3\frac{1}{8} \times 1\frac{5}{8}$.

PRICES:

Brass,	\$1.75
Malleable Iron,	.80



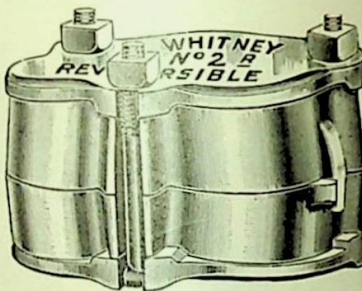
No. 2R. Whitney Reversible Flask.

THIS Flask is made from the No. 2 Whitney master patterns, and is of the same dimensions as that flask, but is reversible. It is conceded to be the best reversible flask on the market. Steel bolts with brass nuts.

Size, $2\frac{3}{8} \times 3\frac{1}{8} \times 1\frac{5}{8}$.

PRICES:

Brass,	\$1.80
Malleable Iron,	.80



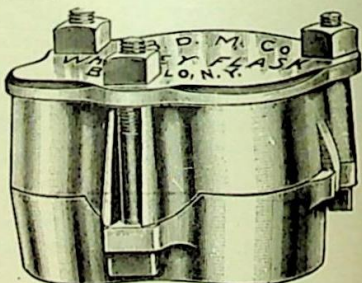
No. 3. Whitney Flask.

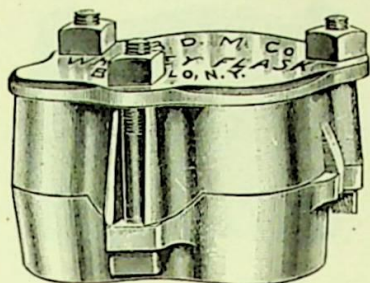
DEEP BOTTOM AND DEEP RING. This Flask has a deep bottom and deep ring. It is especially useful when flasking cases which have a very deep arch and long teeth.

Size, $2\frac{3}{8} \times 3\frac{1}{8} \times 1\frac{7}{8}$.

PRICES:

Brass,	\$1.75
Malleable Iron,	.80





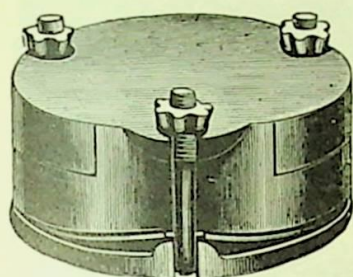
DEEP BOTTOM AND SHALLOW RING. — For flasking partial plates, when it is desired to pack the rubber from the lingual side, and retain the teeth in close contact with the model. Also for repairing plates. Made from the same patterns as the No. 1 Whitney Flask, with extra deep lower section.

**No. 4.
Whitney
Flask.**

Size, $2\frac{3}{8} \times 3\frac{1}{8} \times 1\frac{1}{8}$.

PRICES:

Brass,	\$1.75
Malleable Iron,	.80



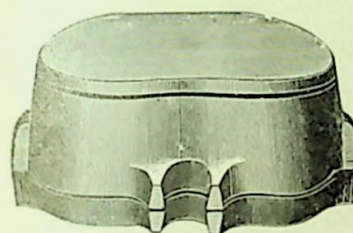
THE Flask is made either in malleable iron or brass. The clamp is always malleable iron.

**No. 5.
Hayes Flask.**

Size, $2\frac{3}{4} \times 3\frac{1}{4} \times 1\frac{3}{8}$.

PRICES:

Brass, with clamp,	\$1.50
Malleable Iron, with clamp,	1.00
Clamp, separately,	.50



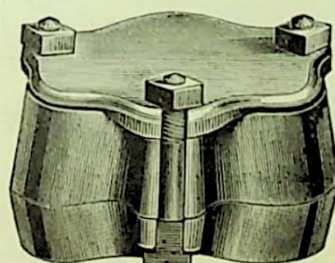
CLOSED by means of the stirrup mechanism of the Edson Vulcanizer, and consequently has no bolts. Has very long and heavy guide-pins, and is intended for use with either vulcanite or celluloid.

**No. 6.
Edson Flask.**

Size, $2\frac{3}{4} \times 3\frac{7}{8} \times 1\frac{9}{16}$.

PRICES:

Brass,	\$2.00
Malleable Iron,	1.00



THIS Flask has a deeper ring than the No. 1 Whitney, but is of the same dimensions in other ways. The bolts are held between ribs, which support the cover and lower section.

**No. 7.
Slot Flask.**

Size, $2\frac{1}{2} \times 3\frac{1}{4} \times 1\frac{5}{8}$.

PRICES:

Brass,	\$1.75
Malleable Iron,	.80

No. 8.

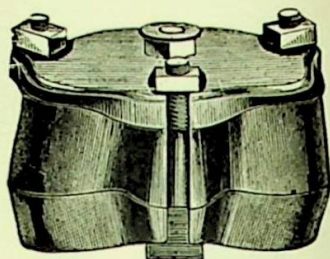
Brown Flask.

SAME dimensions as the No. 7. It has a loose plate in the lower section, a smart rap on which dislodges the plaster entire. The flask can be lifted out of the vulcanizer by the lug upon the cover. Brass only.

Size, $2\frac{1}{2} \times 3\frac{1}{4} \times 1\frac{5}{8}$.

PRICE:

Brass, \$1.50



No. 13.

Slot Flask.

(DEEP.)

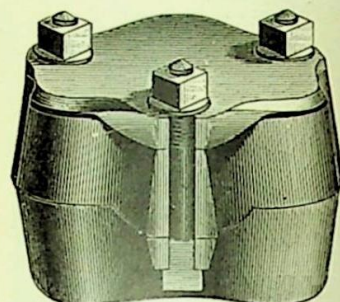
THE upper part of this Flask is the same in size as the No. 7, the lower section being about a quarter of an inch deeper.

Size, $2\frac{1}{2} \times 3\frac{1}{4} \times 1\frac{7}{8}$.

PRICES:

Brass, \$1.85

Malleable Iron,80



No. 18.

**Whitney
Flask.**

(LARGE)

WILL go edgewise into 4-inch vulcanizer, or flatwise into those $4\frac{1}{2}$ -inches diameter.

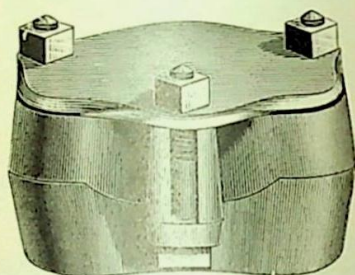
This Flask is furnished with $4\frac{1}{2}$ -inch Lewis Vulcanizer.

Size, $2\frac{3}{4} \times 3\frac{5}{8} \times 1\frac{5}{8}$.

PRICES:

Brass, \$1.85

Malleable Iron,80



No. 18A.

**Whitney
Flask.**

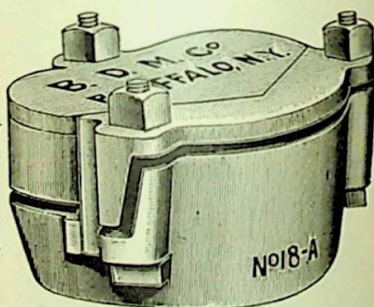
FOR PARTIAL CASES.—This Flask differs from the No. 3A in having the bottom section extended to the height of the cover and carrying it back to nearly one-half its diameter. A portion of the cover is attached to the top ring; the remaining part of the cover is held in place by the rear bolt and two projections on the under side of the cover; these projections hold the cover securely in place. It is also of greater capacity than the No. 3A Flask.

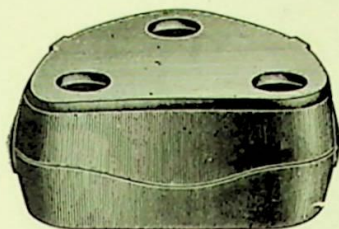
Size, $2\frac{9}{16} \times 3\frac{5}{16} \times 1\frac{5}{8}$.

PRICES:

Brass, \$2.00

Malleable Iron,80



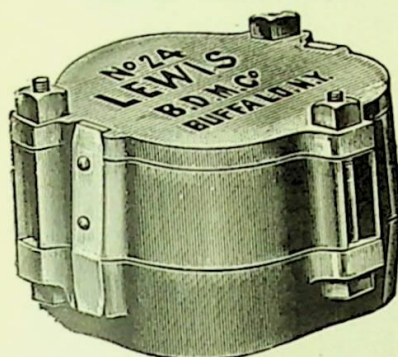


USED in connection with the Donham or Turck Spring Clamp.

**No. 22.
Donham
Flask.**

PRICES:

Brass,	\$1.25
Malleable Iron,	.80



THE guides are steel plates riveted to the ring, extending through grooves milled into lid, ring and bottom. They are of extra length and are made to fit the grooves accurately.

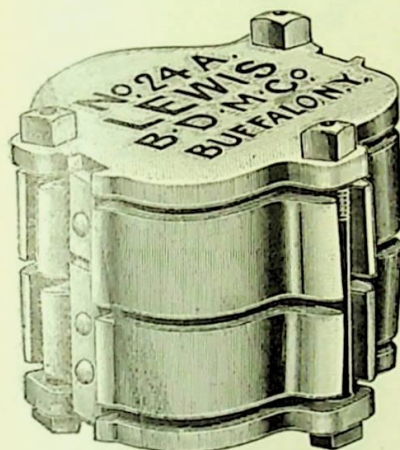
**No. 24.
Lewis Flask.**

All joints of the Flask are faced smooth. The milling and drilling is done by means of special fixtures and tools, thus securing an accuracy of fit and uniformity of parts not heretofore obtainable in the hand-fitted flasks. Decidedly the strongest and best flask made.

Size, $3 \times 3\frac{1}{4} \times 1\frac{1}{8}$.

PRICES:

Brass,	\$2.75
Malleable Iron,	1.00



THIS is from the patterns of No. 24, Lewis Flask, modified at the suggestion of Dr. J. H. Kennerly, of St. Louis, Mo. It is extra deep, with loose bottom and is useful for cases having a very deep arch and long teeth. Has steel guide plates and all joints are faced smooth.

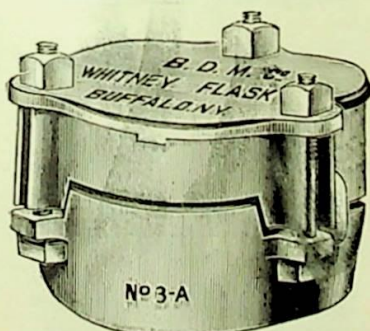
**No. 24A.
Lewis Flask.**

Made only in malleable iron.

Size, $3 \times 3\frac{1}{4} \times 2$.

PRICE:

Malleable Iron,	\$1.25
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FOR PARTIAL CASES.—Made from the No. 3 Whitney patterns, with an extension or lip on the front of lower section which serves as a support for the plaster brought over the teeth in cases where six or eight anterior teeth are ground to the model, as in cases of immediate prosthesis; also to support the plaster teeth of partial lower cases where it is desired to "draw" the posterior teeth; also in many other partial cases where some teeth are to be "held" to the model and others "drawn."

**No. 3A.
Whitney
Flask.**

Size, $2\frac{1}{4} \times 3\frac{1}{8} \times 1\frac{1}{8}$.

PRICES:

Brass,	\$1.75
Malleable Iron,	.80

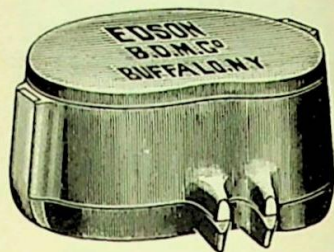
**No. 6A.
Edson Flask.**

FROM the same patterns as the No. 6, Edson Flask, but with the guide pins attached to bottom section and of sufficient length to admit of the use of very thick models and celluloid blanks.

Size, $2\frac{3}{4} \times 3\frac{1}{8} \times 1\frac{3}{8}$.

PRICES:

Brass, \$2.00
Malleable Iron, 1.00



**No. 9.
Whitney
Flask.**

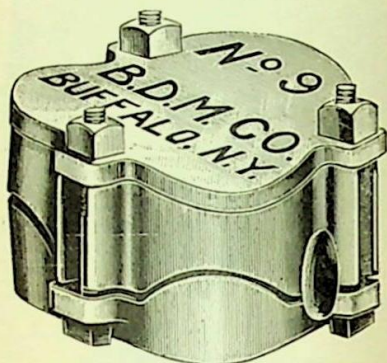
THIS Flask is designed especially for flasking lower dentures and is sure to be appreciated for that purpose. The bottom or lower section is low in front, sides and rear; the back corners are raised and shaped to accommodate the upward curve present on all lower models. It is quite obvious that this shape will effect a great saving in time when flasking lower cases.

The patterns are entirely new and the Flask is large enough to accommodate the largest model.

Size, $2\frac{3}{8} \times 3\frac{1}{8} \times 1\frac{1}{2}$.

PRICES:

No. 9 Flask, Malleable Iron, \$0.80
Brass, 1.85



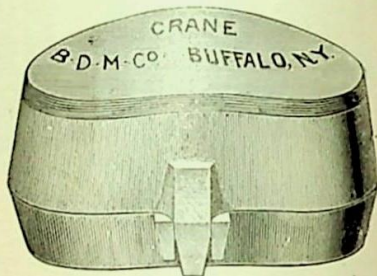
**No. 20.
Crane Flask.**

THIS Flask is designed especially for the Crane Vulcanizer, and is the only one used in it. It is a large sized and strong flask. Made in brass only. No bolts required.

Size, $2\frac{7}{8} \times 3\frac{1}{2} \times 1\frac{5}{8}$.

PRICE:

Brass, \$2.00

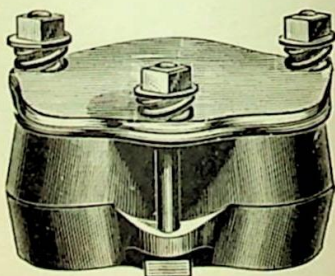


**Extra Long
Bolts with
Springs, for
Whitney
Flasks.**

THESE are the ordinary Whitney Bolts, made of extra length to accommodate spiral springs; the purpose being to close the flask while it is in the vulcanizer by a gentle and equable pressure.

PRICES:

Extra Long Bolts with Springs,
per set of three, \$0.15
Springs only, per set of three,05
No. 1, 4, or 18 Flasks, Iron, with
long Bolts and Springs,80



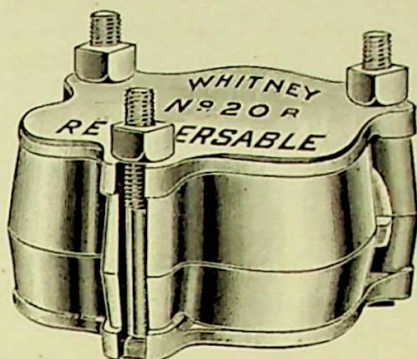
No. 20 R. Whitney Reversible Flask.

LARGE SIZE.

SIMILAR to No. 2 R Reversible Flask, with loose top and bottom plates and rings of different widths, so it may be used as a deep or shallow flask at will.

Steel bolts and brass nuts.

This is the largest vulcanite flask made and will enter a 4-inch vulcanizer edgewise.



PRICES:

No. 20 R, large, Reversible Flask, malleable iron,	\$1.25
No. 20 R, large, Reversible Flask, brass,	2.50

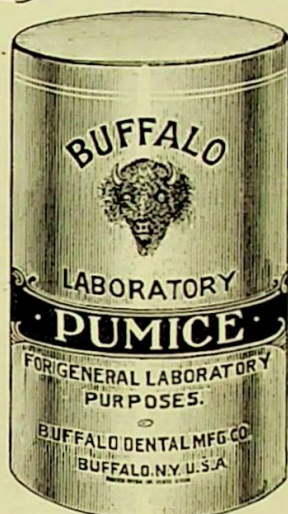
Buffalo Laboratory Pumice.

A PUMICE selected expressly for dental laboratory purposes—just the proper grit to do the work right.

In one pound boxes.

PRICE:

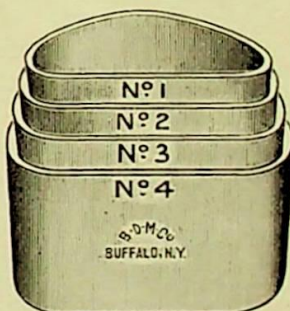
Per box,	\$0.15
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Casting Rings.

O F cast iron, four sizes, graded to nest. Inside dimensions are given.

SIZE.	PRICE.
No. 1. $2\frac{1}{2} \times 2\frac{1}{4}$ inches,	\$.15
No. 2. $2\frac{3}{4} \times 2\frac{1}{8}$ inches,	.15
No. 3. $3\frac{1}{8} \times 2\frac{3}{8}$ inches,	.20
No. 4. $3\frac{1}{2} \times 2\frac{3}{8}$ inches,	.20
The set of four,	.60



No. 4. Glass Mixing Slab.

EDGES and corners ground bevel and all surfaces highly polished. Size $4 \times 6 \times \frac{3}{16}$ inches thick.

PRICE:

No. 4. Glass Mixing Slab,	25 30
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No. 5. Glass Mixing Slab.

A N additional pattern, thicker than those heretofore listed, and equally well finished. Size $4\frac{1}{4} \times 2\frac{3}{4} \times \frac{1}{2}$ inches thick. Ground one side and all edges.

PRICE:

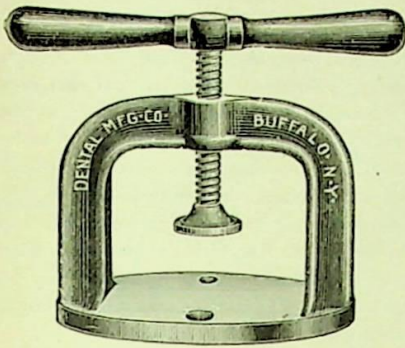
No. 5. Glass Mixing Slab,	\$0.30 .25
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BUFFALO DENTAL MANUFACTURING COMPANY,
BUFFALO, N. Y., U. S. A.

JULY, 1908.

ADDENDA TO CATALOGS A, C AND D.

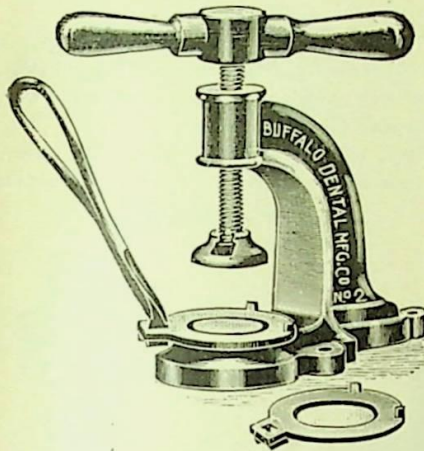




No. 1.
Flask Press.
FOR closing flasks after packing, and will effect considerable saving in bolts and nuts. The No. 1 B. D. M. Co.'s Flask Press, as now made is of ample strength, and enlarged to admit of using our No. 18 large flask. It has a large square-thread screw, well-fitted, and should last a lifetime.

PRICE:

No. 1 Flask Press, \$1.50



Patented March 17, 1903.

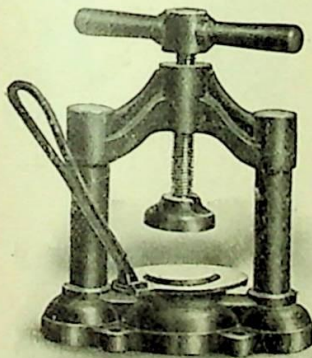
No. 2.
Flask Press.
THE frame is made from newly designed patterns, sufficiently ribbed and strengthened to withstand any reasonable pressure that may be applied in closing a dental flask.

The screw is U. S. standard thread and fits the hub. The presser-foot is so constructed that it receives the force of the full diameter of the screw, a method quite different from that usually employed.

The base on which the flask rests is circular and slightly raised from the body of the press, and is surrounded by a removable ring having on its periphery a slot for engaging a handle for convenience in lifting off or putting it on the base. This removable ring, or perforated disk, serves as a support to the bolts, which should be put in position before placing the flask on the ring. It also serves as a Flask Lifter by means of which the flask may be carried to and from a basin of hot water. Lugs on the loose plate prevent dislodgment of flask while handling.

PRICE:

No. 2. Flask Press, with Flask Lifter, \$2.00



Patented March 17, 1903.

No. 3.
Flask Press.
THE Flask Lifter and Bolt Sustaining Ring which have made the No. 2 Flask Presses so popular, are also incorporated in the new No. 3 Flask Press. The removable ring surrounding raised base serves as a support to the loose bolts, which should be placed in position before placing flask in press. In connection with the handle, this ring also serves as a flask lifter.

As for the strength of the No. 3 Flask Press; its sturdy appearance speaks for itself. You can break it if you set out to do so, but your flask and teeth are sure to go first. Used right, it is likely to serve you indefinitely.

PRICE:

No. 3. Flask Press, with Flask Lifter and Bolt Sustaining Ring, ~~\$2.75~~ \$2.00
See "The Use and Abuse of the Flask Press," next page.

The Use and Abuse of the Flask Press.

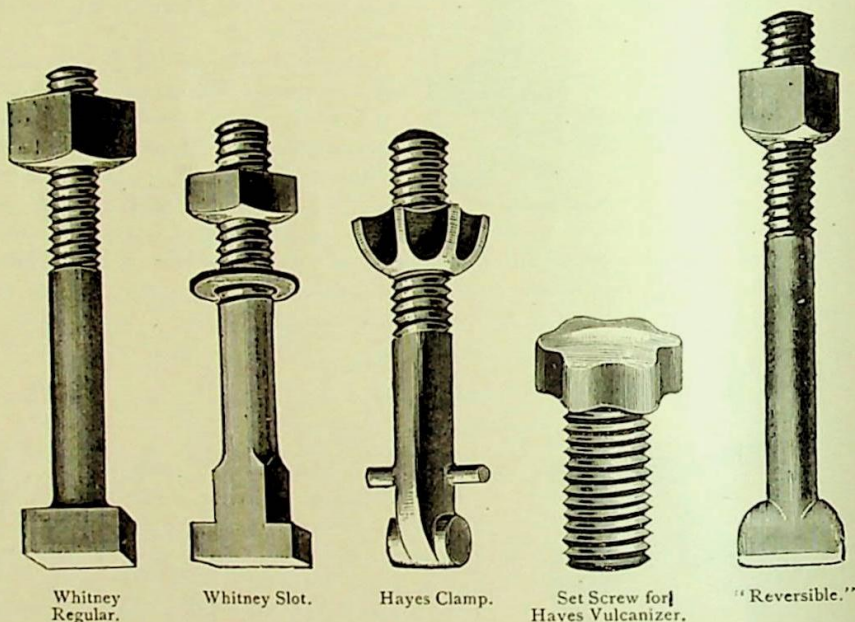
A WORD OF CAUTION.— Soften rubber thoroughly and close flasks slowly. Unvulcanized rubber is an exceedingly tenacious material. It will flow under slight pressure, but will resist tremendous pressure momentarily. When the operation of closing the flask is unduly hastened, the model is apt to be injured and your plate prove a misfit. The tremendous pressure a strong flask press is capable of exerting, tempts one to imprudence in this respect.

In the B. D. M. Co.'s No 3 Flask Press, for example, each pound of power applied to the handle produces 200 lbs. of pressure on the flask, and unless the rubber is heated until it becomes thoroughly softened and the closing process is gradual, tons of pressure may be applied with disastrous results; *i. e.*, the Flask Press will bear out its appearance of strength and stand the strain, but your teeth and flask are sure to go.

B. D. M. Co.'s Flask Bolts.

OUR Whitney Flask Bolts are made from special patterns of forged steel, with extra thick case-hardened nuts, which give about double the wear to the bolt, as compared with those commonly sold.

Our Hayes Flask Bolts are made of Forged Steel, with malleable iron nuts. We believe our flask bolts to be the best and most durable in the market. Each set is put up in a suitable box bearing our imprint.

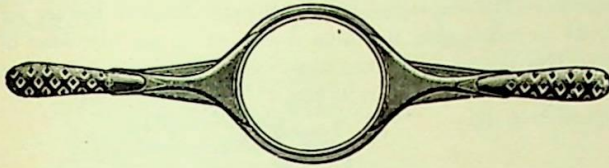


PRICES:

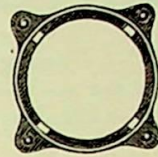
Whitney Regular, for Nos. 1, 4, 18 and 18 A Flasks, . . . per set of 3, . . .	\$0.12
Whitney extra long, for Nos. 2, 3 and 3 A Flasks,	.12
Whitney Slot, for Nos. 7, 8 and 13 Flasks,	.12
Lewis Bolts, for No. 24 Flask,	.12
Lewis extra long, for Lewis No. 24 A Flask,	.15
Reversible Bolts, with Brass Nuts, for No. 2 R and Star Flask, " " . . .	.25
Hayes Steel Clamp Bolts, for No. 5 Flask,	.25
Hayes Set Screws, for Hayes Vulcanizers,	.25

VULCANIZER WRENCHES AND BED-PLATES.

MALLEABLE IRON.



No. 1. Edson or Crane Vulcanizer Cap Wrench.
PRICE, . . . 75 cts.



No. 2. Edson or 4 1/2-inch Whitney Bed-Plate.
PRICE, . 25 cts.



No. 21. Lewis Cross-Bar Wrench.
PRICE, . . . 25 cts.



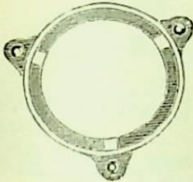
No. 19B. Spanner for Crane Vulcanizer.
PRICE, . . . 15 cts.



No. 11. Vulcanizer Top Wrench.
PRICE, . . . 25 cts.
For the Crane or Edson Vulcanizers.



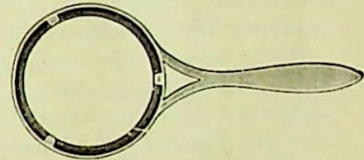
No. 14. Edson Stuffing-Box Wrench.
PRICE, . . . 15 cts.
One end for tightening the Stuffing-Boxes; the other for Safety Apparatus and Blow-off.



No. 9. Bed-Plate for Whitney Vulcanizer. 4-inch.
Price, . . . 25 cts.



No. 18. Pin Wrench for Crane Vulcanizer.
PRICE, . . . 15 cts.



No. 8. Whitney Round Wrench.
PRICE, . . . 50 cts.



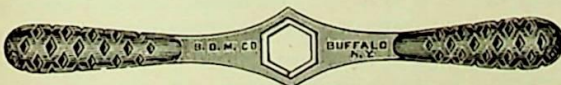
No. 17A. New Pattern Flask Wrench; also for Safety Valve and Blow-off.
PRICE, . . . 15 cts.



No. 17. Old Pattern Hayes or Whitney Flask Wrench; also for Safety Valve and Blow-off.
PRICE, . . . 15 cts.



No. 3. Whitney Straight Wrench.
No. 4. Wrench for Crane Stuffing-Box.
PRICE, . . . 25 cts.



No. 10. B. D. M. Co.'s Improved Bed-Plate Wrench for Whitney Vulcanizer.
PRICE, . . . 50 cts.

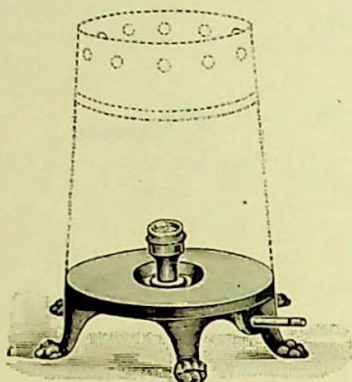


No. 20. Pot Lifter for Lewis Cross-Bar Vulcanizer.
PRICE, . . . 15 cts.

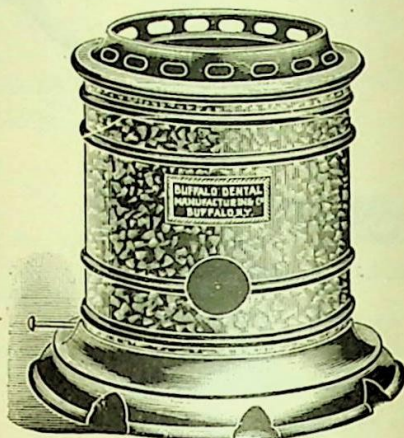
HEATING APPARATUS.

Gas Heating Apparatus.

FOR VULCANIZERS.—The employment of a separate Bunsen Burner for supplying heat for vulcanizing has been discarded in our new form of heating apparatus. This applies to all vulcanizers of our manufacture. An entirely new and remarkably efficient burner, made of cast iron and having a perforated cop-



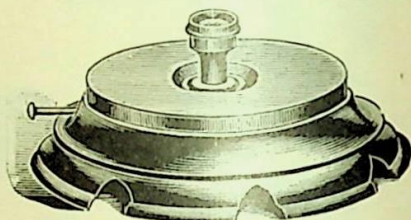
FOR HAYES OR WHITNEY VULCANIZERS.



FOR LEWIS CROSS-BAR VULCANIZER.

per cap is used and is made a permanent part of the base. It is therefore a fixture, and is ready for instant use without the trouble of adjusting for each vulcanizing operation.

The Base and Top Ring of the Lewis, Edson and Crane Vulcanizers are made of cast iron and japanned. The Whitney and Hayes Vulcanizers are supplied with a cast-iron base only. The jackets for the Lewis, Whitney and Hayes Vulcanizers are made of galvanized iron.



BASE FOR LEWIS, EDSON OR CRANE VULCANIZERS.

The jackets for the Edson and Crane Vulcanizers are made of heavy sheet steel and both top ring and base are firmly bolted to them. No other style of Heating Apparatus is suitable for the Lewis, Edson or Crane Vulcanizers.

PRICES:

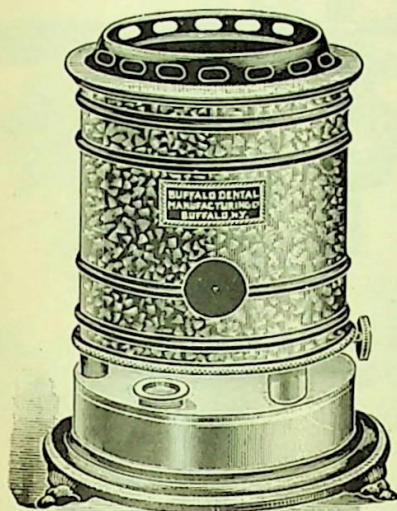
Gas Heating Apparatus for Lewis, Whitney or Hayes Vulcanizers,	\$1.50
For Edson or Crane Vulcanizers,	2.00

For prices of separate parts see following pages.

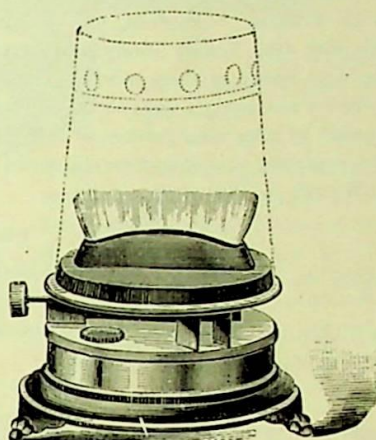
Kerosene Heating Apparatus.

FOR VULCANIZERS.—This stove is of our own design, and is especially adapted to vulcanizer work. It has a 4-inch wick, and will be found to have ample power. This stove is now furnished with all of our vulcanizers, when ordered "for kerosene," without advance in price. As the size of the jackets varies for different vulcanizers, it is important, when ordering, to state the kind of vulcanizer the stove is to be used with, and its size, whether one, two or three case, 4-inch or 4½-inch diameter.

The burner or stove used with the Lewis Cross-Bar Vulcanizer is the same as described in the foregoing. The vulcanizer is supported by a substantial parallel casing or jacket of galvanized iron, capped by a japanned cast-iron ring, making a very rigid and durable heating apparatus.



FOR LEWIS CROSS-BAR VULCANIZER.



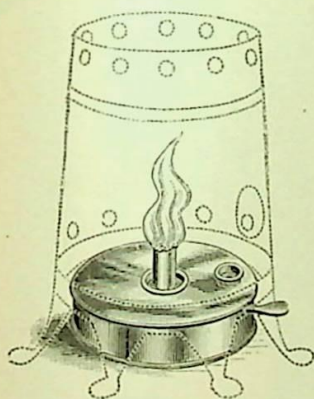
FOR WHITNEY OR HAYES VULCANIZERS.

PRICES:

Kerosene Heating Apparatus, complete,	\$1.50
Kerosene Lamp, separately,	.75

For prices of separate parts see following pages.

For Edson and Crane Kerosene Heating Apparatus see following pages.



FOR WHITNEY OR HAYES VULCANIZERS.

FOR WHITNEY OR HAYES VULCANIZERS.—This Heating Apparatus was designed by the late Dr. B. T. Whitney many years ago, and remains the same in its general features as when it left his hands, although improvements have been made from time to time in minor points. The wick tube is five-eighths of an inch in diameter. The wick is moved to adjust the size of the flame by means of the lever which projects from the side of the lamp body.

The lamp is placed under a cast-iron stand, which protects it from the radiated heat, and the vulcanizer is supported by the galvanized-iron jacket shown in the outline.

The same lamp is used for the Lewis Cross-Bar Vulcanizer when ordered for alcohol, but with the regular style of Lewis Gas Jacket and Stand, shown on a preceding page.

Alcohol Heating Apparatus.

PRICES:

Alcohol Heating Apparatus, complete,	\$1.50
Alcohol Lamp, separately,	.75

For prices of separate parts see following pages.

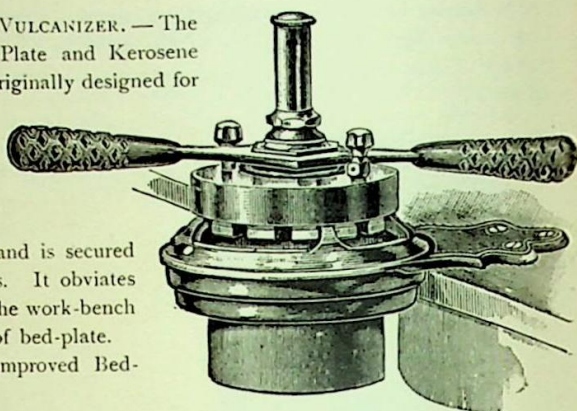
Overhanging Bed-Plate.

FOR WHITNEY VULCANIZER.—The combined Bed-Plate and Kerosene Heating Apparatus, originally designed for

the Edson and Crane Vulcanizers, has been altered to be used as an overhanging bed-plate to accommodate both the 4-inch and 4½-inch Whitney Vulcanizers.

This Bed-Plate is very strong, and is secured to the work-bench by three screws. It obviates the necessity of cutting a hole in the work-bench as required by some other patterns of bed-plate.

The engraving also shows our improved Bed-Plate Wrench No. 10.



PRICES:

No. 19.	Bed-Plate, for 4-inch Whitney Vulcanizer,	\$0.75
No. 19A.	Bed-Plate, for 4½-inch Whitney Vulcanizers,	.75
No. 10.	Improved Bed-Plate Wrench,	.50

Combined Bed-Plate and Kerosene Heating Apparatus.

FOR THE CRANE, EDSON AND WHITNEY VULCANIZERS.—The operation of closing the flasks is performed, when the Crane or Edson Vulcanizers are used, after the vulcanizer is partially heated; the temperature being usually nearly 260°. With the ordinary heating apparatus, the force applied to turn the screw and close the flask will turn the vulcanizer in its jacket. In this new heating apparatus the vulcanizer remains in its bed-plate, where it is held firmly, and the flasks are closed more conveniently than in the old style heating apparatus. A slight change has been made in the patterns, by which this bed-plate and heating apparatus can now be used in connection with the 4-inch Whitney Vulcanizer.

The Bed-Plate Ring has a side flange upon it, by which it is fastened to the edge of the bench so as to overhang. Depending from the ring is the jacket to which the kerosene stove is attached. The necessity for cutting a hole through the bench is thereby avoided, and the stove is brought out to a convenient position for use. The lamp has a 4-inch wick, is securely held, and easily removed for filling. This apparatus is furnished with the Edson or Crane Vulcanizers, without advance in price.



PRICES:

No. 30D.	Combined Bed-Plate and Kerosene Heating Apparatus for Edson or Crane Vulcanizers,	\$2.50
No. 30E.	Combined Bed-Plate and Kerosene Heating Apparatus for Whitney 4-inch Vulcanizers,	2.50

When ordered with 4-inch Whitney Vulcanizers, in place of ordinary heating apparatus, 75 cents advance on list price of Vulcanizer.

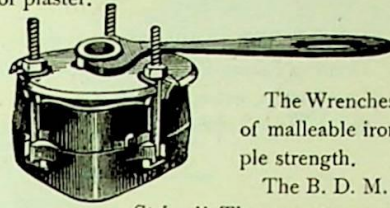
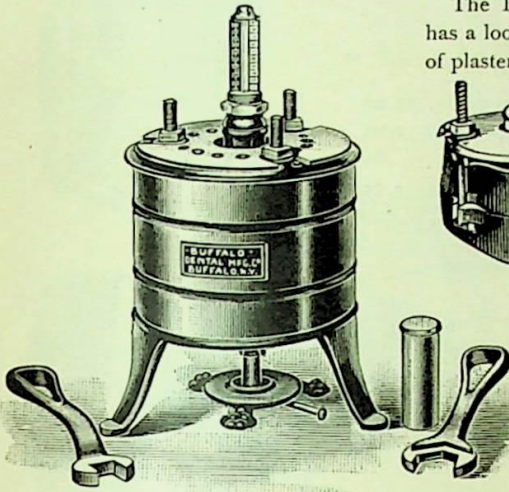
When ordered separately, specify whether for Edson, Crane or Whitney 4-inch Vulcanizer.

THIS apparatus is recommended for moulding celluloid plates by the "Dry Heat" process, which renders the celluloid hard and dense in texture, and it is believed minimizes the danger of warping of plates.

The Flask is of malleable iron and has a loose bottom to facilitate removal of plaster.

Improved Brown Celluloid Apparatus.

DRY HEAT.



The Wrenches supplied are of malleable iron and of ample strength.

The B. D. M. Co.'s "Red Stripe" Thermometer, mounted in the regular vulcanizer thermometer case, and supplied with a mercury bath, is furnished with the apparatus, and it is fitted with either gas, alcohol or kerosene heater as desired.

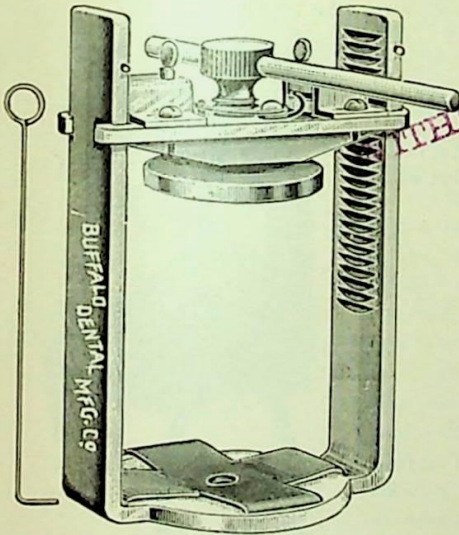
Full instructions for working celluloid by the "Dry Heat" process accompany each apparatus.

PRICES:

Brown Celluloid Apparatus, improved,	\$6.00
Extra Flasks, each,	2.00
Specify Heating Apparatus desired.	

FOR CLOSING DENTAL FLASKS.—The Turck Spring-Clamp possesses numerous advantages, among them ease and facility of adjustment to take either one or two flasks as desired; positive action of spring and great strength of parts. The body is a HEAVY ONE-PIECE STEEL STAMPING, of ample strength to withstand

Turck Spring-Clamp.



Patented August 11, 1903.

every necessary strain. The Cross-Head, Sliding Ratchets, Pressure Screw and Foot, Flat Spring, Closing Bar and Lifting Hook are also of steel. Steel parts are electro-galvanized. The Cross-Head carries the pressure screw and the sliding ratchets, which engage with ratchet teeth milled in the uprights. Sliding ratchet and ratchet teeth are properly hardened.

To raise Cross-Head, press the two handles or levers inwardly to disengage ratchets and lift it to desired position, while to lower Cross-Head simply press it down, the ratchet locking to place automatically. The four arm flat spring resting on bottom of clamp allows the necessary give to insure spring pressure.

The Turck Spring Clamp will enter any vulcanizer 4 inches diameter inside and 5 1/2 inches deep. The No. 2, 4-inch Lewis Vulcanizer takes it readily. It takes No. 22 Donham Flasks.

PRICES:

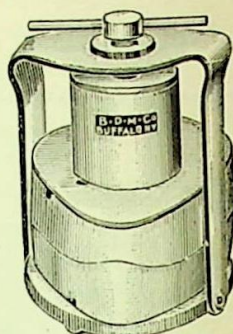
Turck Spring-Clamp,	\$3.00
No. 22 Donham Flasks, Brass, each,	1.25
No. 22 Donham Flasks, Iron, each,	.80

**Donham
Spring-Clamp.**

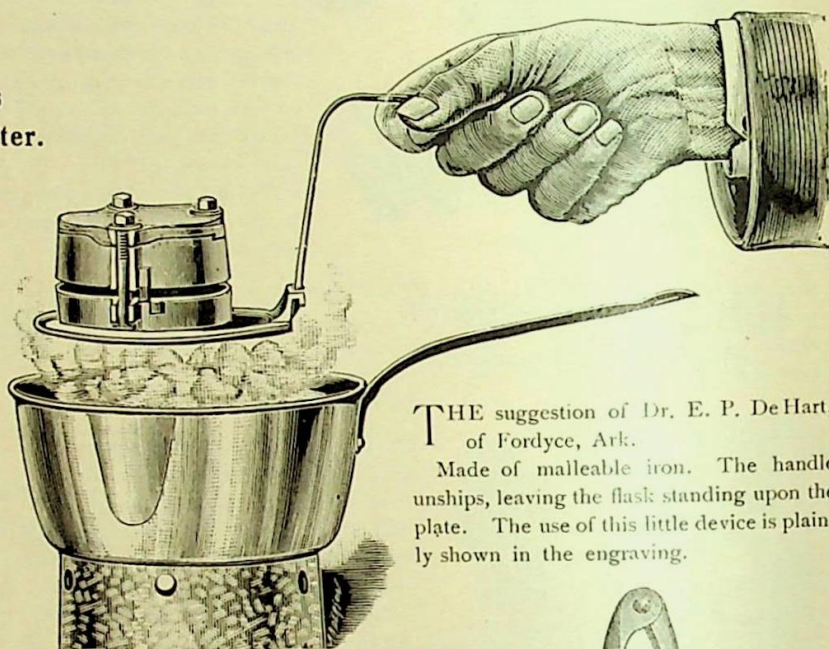
FOR vulcanizing rubber dentures under spring pressure. For two or three flasks, with space filler so either No. 2 or 3 may be used with single flask.

PRICES:

- No. 2. Donham Spring-Clamp, for two flasks, \$1.25
 No. 3. Donham Spring-Clamp, for three flasks, 1.25
 No. 22. Iron Flasks, extra, each,80
 No. 22. Brass Flasks, extra, each, 1.25



**De Hart's
Flask Lifter.**



THE suggestion of Dr. E. P. DeHart, of Fordyce, Ark.

Made of malleable iron. The handle unships, leaving the flask standing upon the plate. The use of this little device is plainly shown in the engraving.

It avoids the annoyances incident to handling hot flasks, enabling the dentist to remove them from the dish in which they are boiled, without touching them.

PRICE:

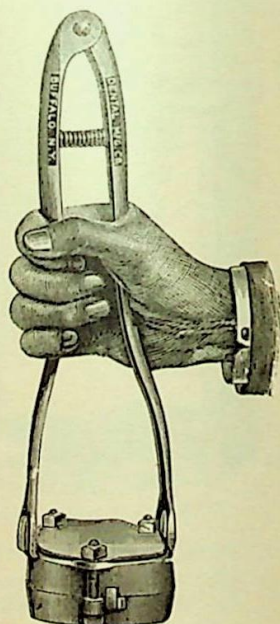
- De Hart's Flask Lifter, 25 cents.

**No. XII.
B. D. M. Co.'s
Flask Tongs.**

THESE Tongs are of malleable iron, nickel-plated on the rough, and 13 inches long. They will be found very useful for lifting flasks from the vulcanizer. They are of sufficient length to reach the bottom of a three-case vulcanizer, and will securely grip any flask.

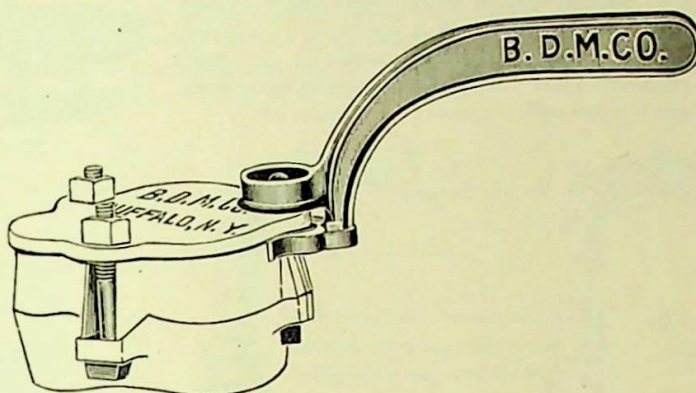
PRICE:

- No. XII. Flask Tongs, 50 cents.



WILL carry flasks to and from boiling-pan without soiling or burning the hands. Grip by side bolts of Nos. 1, 2, 3, 3A, 4 or 18, B. D. M. Co.'s Whitney Flasks as shown.

**No. 13.
Lewis
Flask Lifter.**



Patented January 2, 1906.

PRICE:

No. 13. Lewis Flask Lifter, Malleable Iron, Nickel Dipped, 25 cents.
By mail, postage paid, 30 cents.

FOR DETERMINING THE NECESSARY QUANTITY OF RUBBER TO REPLACE THE TRIAL PLATE IN PACKING DENTAL FLASKS.—This consists of a special tumbler, with a depressed cover of spun brass, having a short flat tube soldered into a center opening.

**The Buffalo
Rubber Gauge.**

IMPROVED FORM.



METHOD OF USING.—Remove from the mould all of the wax or gutta-percha trial plate, place it in the tumbler and fill tumbler with water to within half an inch of the top. Put on the brass cover and the surplus water will overflow into it through the flat tube. Throw away the surplus; remove the trial plate, replace the cover and introduce strips of rubber through the opening in cover until the water again stands at the top of the tube. The gauge then contains the exact bulk of the trial plate in rubber.

The small sectional area of the tube, the only escape which is afforded to the water, renders the gauge very sensitive, and a very exact measurement is secured. The operation takes but a minute's time, and will be found a much better method than guessing.

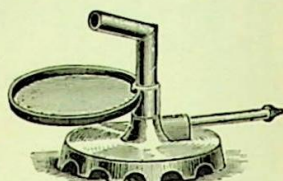
PRICE:

Buffalo Rubber Gauge, 50 cents.

The B. D. M. Co. Vulcanizers of today are the result of nearly forty-five years' experience as Vulcanizer Specialists. During all those years our Vulcanizers have set the pace—and they are doing it today.

**No. 5F.
Lewis
Waxing
Burner.**

THIS burner is made from entirely new patterns, and is practically new in design. The burner is constructed with an angle at its upper end, to prevent melted wax from running down the tube and clogging up the gas jet. The burner tube is open its entire length, and if by accident wax should get in the burner it will drop through. A revolving drip-table is attached to the upright tube to catch melted wax and prevent its dropping on the work-bench, and it is also useful for resting hot spatulas on.



NO. 5 F.

PRICE:

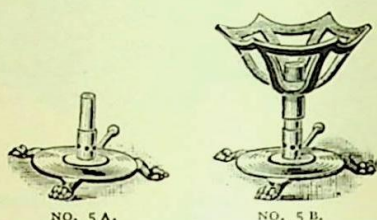
No. 5 F. Lewis Waxing Burner, 50 cents.

**Nos. 5A & 5B.
Laboratory
Gas Burners.**

THIS burner will be found very convenient for general heating purposes when used with spider. Total height, 2½ inches.

PRICES:

No. 5A. Laboratory Gas Burner, \$0.50
No. 5B. Laboratory Gas Burner,
with Spider,75



NO. 5 A.

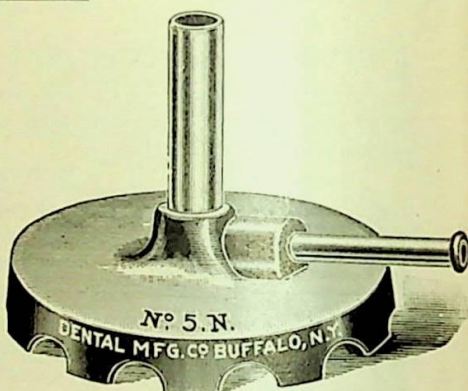
NO. 5 B.

**No. 5N.
Bunsen
Burner.**

AN efficient Bunsen for various-laboratory uses; especially desirable for waxing up models. The burner tube is open at the bottom, avoiding the danger of clogging gas orifice with melted wax. It has a substantial japanned iron base. Height, 2½ inches.

PRICE:

No. 5 N. Bunsen Burner, . . 25 cents.



**Rubber
Plaster
Bowls.**

B. D. M. Co.'s Rubber Plaster Bowls are made of good quality rubber to give them the necessary elasticity and are of sufficient thickness to hold up well during the process of mixing plaster.

PRICES:

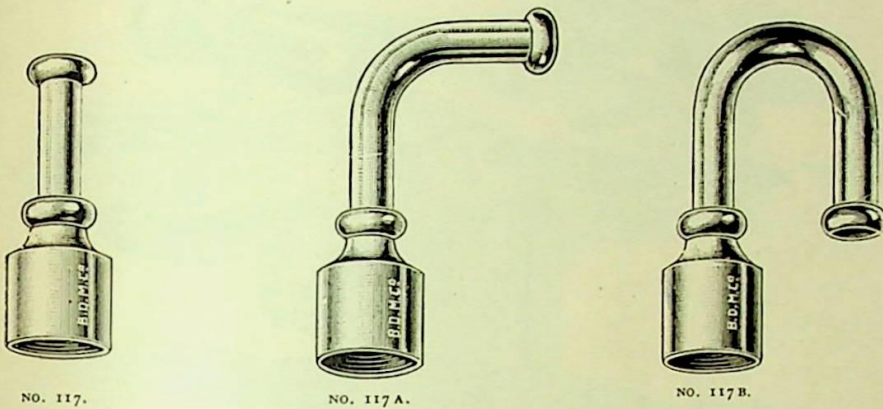
Rubber Plaster Bowl, small, . . . \$0.40
Rubber Plaster Bowl, medium,50
Rubber Plaster Bowl, large,70



FITTINGS FOR LABORATORY BENCHES.

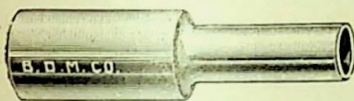
THESE connections are made of brass, polished and designed to be secured on gas fixture openings for attachment of rubber tubing leading to Blowpipes, Bunsen Burners or Gas Burners under Dental Vulcanizers. In situations where a gas pipe runs at the back of the bench and parallel with it, the No. 116 Gas Tap is preferable, attaching the female end to the pipe and the brass connection desired to the male end.

No. 117. Brass Connections.



PRICES:

No. 117.	Brass Connections, straight,	\$0.20
No. 117 A.	Brass Connections, quarter turn,	.30
No. 117 B.	Brass Connections, half turn,	.30

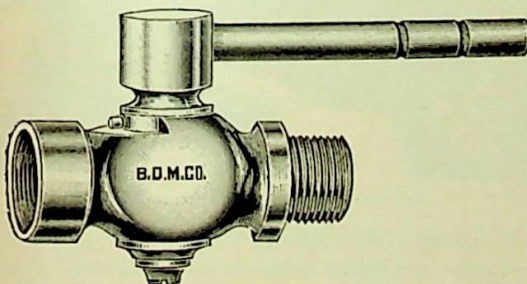


THIS reducer is made of brass and is used to reduce the size of rubber connecting tubing from $\frac{3}{8}$ or $\frac{5}{16}$ -inch to $\frac{3}{16}$ -inch. The ends are not threaded.

No. 118. Brass Reducer.

PRICE:

No. 118.	Brass Reducer,	10 cents.
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No. 116. FULL SIZE.

THIS tap is nicely made and threaded on the female end to be attached to $\frac{1}{8}$ -inch gas pipe, or any ordinary gas fixture. The male end is threaded to receive any of the No. 117 brass connections.

No. 116. Tap.

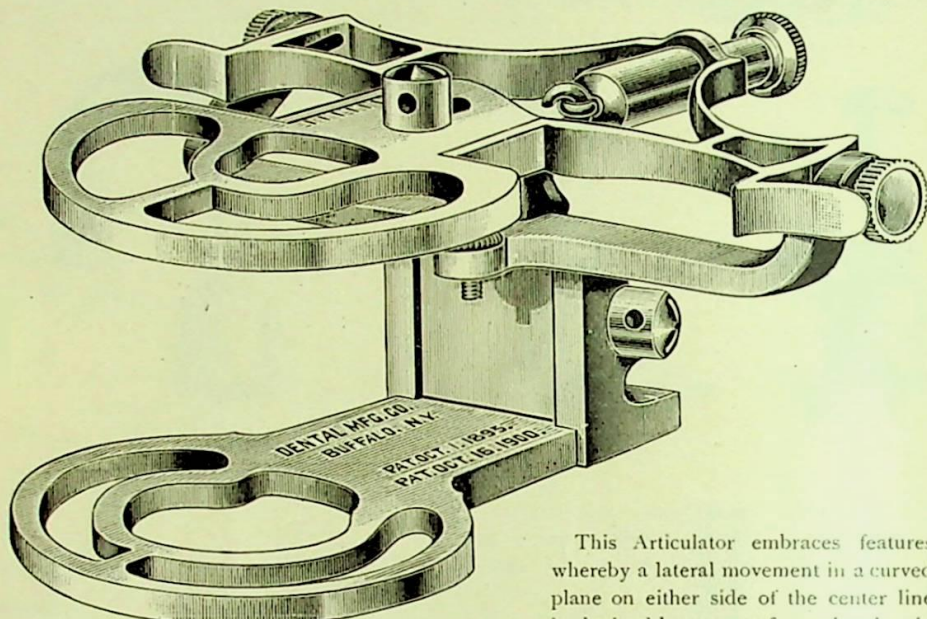
PRICE:

No. 116.	Gas Tap,	60 cents.
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ARTICULATORS.

No. 12. Antes-Lewis Anatomical Articulator.

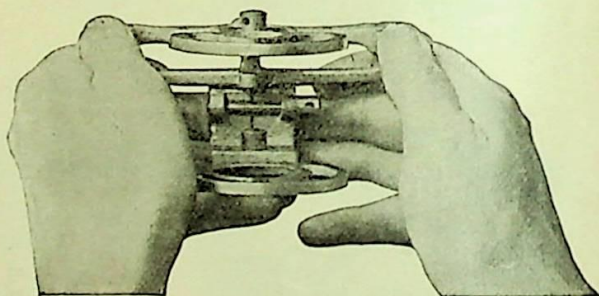
THE No. 12 Antes-Lewis Anatomical Articulator conforms to the requirements of a perfect Anatomical Articulator as set forth by the late Dr. W. G. A. Bonwill, as to the measurements between the condyles, and the measurements from the condyles to the cutting edges of the incisors, viz.: an equilateral triangle of four inches.



Patented October 1, 1895. October 16, 1900.

This Articulator embraces features whereby a lateral movement in a curved plane on either side of the center line is obtained by means of angular slots in the yoke which forms the hinge. The slots in the yoke also allow an endwise, or forward and back, movement of the upper plate on a horizontal plane; and when the pressure imparting each movement is relaxed the parts are automatically returned to their normal position by the encased spring on the end of the yoke. If desired, the yoke can be deprived of all motions, except the hinged one, by compressing the spring by means of the milled sleeve on the end of the yoke. These combined features are not present in any other articulator excepting the Antes No. 11.

A locking device, by which the upper plate is sustained in a position at right angles to the base, has been added to this articulator; it also prevents the upper portion from falling down to the injury of teeth or cast. The upper plate and also the sliding post are indexed, to enable the parts to be returned to the place previously occupied, should there be occasion to remove either the plate or yoke from the body of the articulator. Thumb pieces have been supplied to the oscillating yoke for the purpose of operating it when testing the case for occlusion. Provision has been made in the body of the articulator for raising or lowering, or in other words, increasing the distance between the



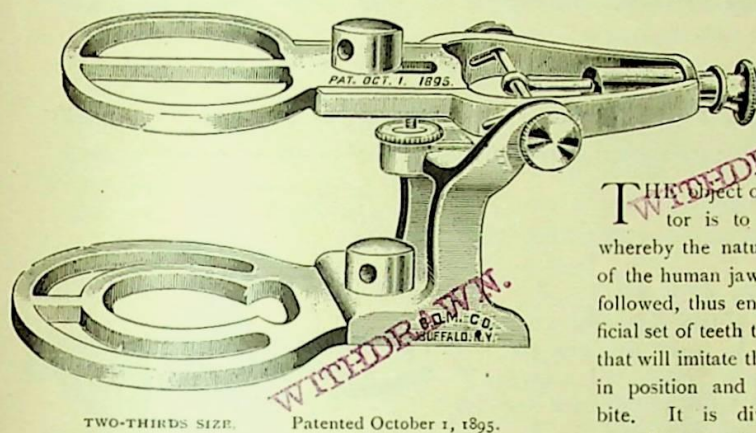
POSITION WHEN TESTING OCCLUSION.

operating it when testing the case for occlusion. Provision has been made in the body of the articulator for raising or lowering, or in other words, increasing the distance between the

upper and lower plates to accommodate the different thickness of casts. Both the upper and lower plates are removable, thus enabling an extra set of plates to be used on one body.

PRICES:

No. 12. Antes-Lewis Anatomical Articulator,	\$3.00
Extra Top or Bottom Plates, each,	.20
Extra Top Plate with off-set, each (see No. 11 Articulator),	.20



**No. 11.
Antes
Anatomical
Articulator.**

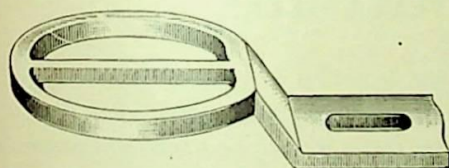
THE object of this Articulator is to supply means whereby the natural movements of the human jaw can be closely followed, thus enabling an artificial set of teeth to be assembled that will imitate the natural teeth in position and correctness of bite. It is divested of all superfluous parts not absolutely

required in the proper articulation of artificial teeth, yet it contains all mechanical essentials for practical anatomical purposes.

This Articulator embraces features whereby a lateral movement in a curved plane on either side of the center line is obtained by means of angular slots in the yoke which forms the hinge. The slots in the yoke also allow an endwise, or forward and backward movement of the upper plate on a horizontal plane; and when the pressure imparting each movement is relaxed the parts are automatically returned to their normal position by the encased spring on the end of the yoke. If desired, the yoke can be deprived of all motions, except the hinged one, by compressing the spring by means of the milled sleeve on the end of the yoke. These combined features are not present in any other articulator except the No. 12 Antes-Lewis.

Both the upper and lower plates are removable, thus enabling an extra set of plates to be used on one body. The upper plate can be supplied with an off-set to accommodate thick casts.

The body of the Articulator is of improved shape, and will be found to fit the hand perfectly.



OFF-SET PLATE.

PRICES:

No. 11. Antes Anatomical Articulator, nickel dipped,	\$2.50
Extra Top or Bottom Plates, each,	.20
Extra Top Plate, with off-set, each,	.20

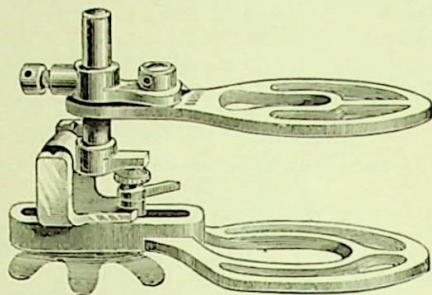
**No. 8.
Lewis
Independent
Motion
Articulator.**

IN the construction of this Articulator, the desirable points in several Articulators were combined with new devices to produce a practical implement in every particular.

Every motion is independent. The means for correcting false positions in the bite are complete in every respect, while the range

to accommodate different thicknesses of casts is ample.

The hinge of this Articulator is constructed without a removable pin. It is easily taken apart by turning back the top of the Articulator to a right angle to the base, and pressing to the right.



PRICES:

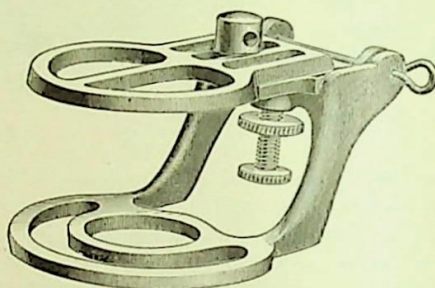
- No. 8. Lewis Independent Motion Articulator, plain brass, \$2.00
No. 8. Lewis Independent Motion Articulator, polished and nickel plated, 2.50

**No. 9.
Articulator.**

THIS Articulator is now made from new patterns, heavier and stronger than heretofore, and is probably the best cheap Articulator in the market.

PRICES:

- No. 9. Articulator, plain, each, . . \$1.00
Polished and nickel plated, each, . 1.25



THE CARE OF VULCANIZERS.

CORROSION plays a prominent part in the destruction of Vulcanizers. Many busy dentists unconsciously hurry the process by their failure to give the various parts of a Vulcanizer proper attention. After vulcanizing, the pot should be emptied of its contents, and thoroughly scrubbed and dried. The inside of cap should also be well cleaned and dried.

If the same water be used repeatedly or the machine set aside partly filled with water, corrosion is certain to quickly weaken the copper boiler while the opposite course is equally certain to materially lengthen its life and usefulness.

PRICES OF SEPARATE PARTS OF VULCANIZERS AND APPURTENANCES.

BLOW-OFF VALVE, complete,	\$0.75	No. 5 Hayes Flask, brass, and Clamp, \$1.50	
Blow-off Stud,	.38	No. 5 Hayes Flask, iron, less Clamp, .50	
Blow-off Cap,	.38	No. 5 Hayes Clamp alone,	.50
Blow-off Pin,	.10	No. 6 Edson Flask, iron,	1.00
BOLTS—		No. 6 Edson Flask, brass,	2.00
Whitney Regular, for Nos. 1, 4, 18,		No. 6 A Edson Flask, iron,	1.00
18 A Flasks, set of 3,	.12	No. 6 A Edson Flask, brass,	2.00
Whitney, extra long, for Nos. 2, 3,		No. 7 Whitney Slot Flask, iron,	.80
3 A Flasks, set of 3,	.12	No. 7 Whitney Slot Flask, brass,	1.75
Whitney Slot for Nos. 7, 8, 13 Flasks,		No. 8 Brown Flask, brass,	1.50
set of 3,	.12	No. 9 Whitney Flask, iron,	.80
Whitney extra long, with springs for		No. 9 Whitney Flask, brass,	1.85
Nos. 1, 4, 18, 18 A Flasks, set of 3,	.15	No. 13 Whitney Slot Flask, deep,	
Lewis, for No. 24 Flask, set of 3,	.12	iron,	.80
Lewis extra long, for Lewis No. 24 A		No. 13 Whitney Slot Flask, brass,	1.85
Flasks, set of 3,	.15	No. 18 Whitney Flask, large, iron,	.80
Reversible Bolts for No. 2 R and Star		No. 18 Whitney Flask, large, brass,	1.85
Flasks, set of 3,	.25	No. 18 A Whitney Flask, iron,	.80
Hayes Clamp Bolts, set of 3,	.25	No. 18 A Whitney Flask, brass,	2.00
Brown's Celluloid Bolts, set of 3,	.50	No. 20 Crane Flask, brass,	2.00
Bolt and Nut for "Lewis" Cross-Bar,	1.00	No. 22 Donham Flask, iron,	.80
Celluloid Apparatus, Brown's,	6.00	No. 22 Donham Flask, brass,	1.25
CAPS—		No. 24 Lewis Flask, iron,	1.00
"Lewis" forged steel, with Manifold		No. 24 Lewis Flask, brass,	2.75
and Thermometer Case, complete,	8.00	No. 24 A Lewis Flask, iron,	1.25
"Lewis" forged steel, without trim-		Flask Press, No. 1,	1.50
mings,	3.00	Flask Press, No. 2,	2.00
Cross-Bar, "Lewis," forged steel,	3.00	Flask Press, No. 3,	2.75
FLASKS—		Flask Lifter, De Hart's,	.25
No. 1 Whitney Flask, iron,	.80	Flask Lifter, Lewis No. 13,	.25
No. 1 Whitney Flask, brass,	1.50	HEATING APPARATUS, "Lewis," gas,	
No. 2 Whitney Flask, iron,	.80	complete,	1.50
No. 2 Whitney Flask, brass,	1.75	Top ring for same,	.20
No. 2 R Whitney Flask, iron,	.80	Jacket for same,	.40
No. 2 R Whitney Flask, brass,	1.80	No. 64 J. Gas Burner for same,	.75
No. 3 Whitney Flask, iron,	.80	Iron Base for same,	.35
No. 3 Whitney Flask, brass,	1.75	Perforated Cap for burner,	.05
No. 3 A Whitney Flask, iron,	.80	Heating Apparatus, "Lewis," kerosene,	
No. 3 A Whitney Flask, brass,	1.25	complete,	1.50
No. 4 Whitney Flask, iron,	.80	Top Ring for same,	.20
No. 4 Whitney Flask, brass,	1.75	Jacket for same,	.40
No. 5 Hayes Flask, iron, and Clamp, 1.00			

Iron Base for same,	\$0.15	SAFETY APPARATUS, complete with	
Cone Plate for same,	.25	package of disks,	\$1.00
Lamp for same,	.75	Safety Valve Stud,	.38
4-inch Felt Wick for same,	.05	Safety Valve Cap,	.38
Heating Apparatus, "Lewis" alcohol,		Safety Valve Washer,	.10
complete,	1.50	Safety Disks, per package,	.25
Lamp for same,	.75	Set Screws, for Hayes Screw Collar,	
Top Ring, Jacket and Iron Base for		per set of 3,	.25
same, prices same as for "gas."		Siphon, brass, No. 2,	1.25
Heating Apparatus, "Edson" or			
"Crane," gas, complete,	2.00	THERMOMETER CASE, complete with	
Heating Apparatus, "Edson" or		tube and scale,	1.75
"Crane," kerosene, complete,	2.50	Thermometer tube and scale, B. D.	
Heating Apparatus, "Whitney" or		M. Co.'s Red Stripe,	.60
"Hayes," gas, alcohol or kerosene,	1.50	Thermometer Case, inside,	.75
Separate parts, same prices as for		Thermometer Case, outside,	.50
"Lewis" Heating Apparatus parts.		Tongs, Flask, No. XII.,	.50
MANIFOLD, "Lewis," complete, with			
blow-off and safety valve and pack-		WRENCHES—	
age of safety disks,	3.25	No. 1 "Edson" or "Crane" Cap	
Manifold Body alone,	1.50	Wrench,	.75
		No. 2 "Edson" or "Crane" Bed-	
PACKING, for Edson Stuffing-Boxes, per		Plate,	.25
set,	.10	No. 3 "Whitney" Straight Wrench,	.25
Packing, endless, "Lewis," 4-inch,	.10	No. 4 "Crane" Stuffing-box Wrench,	.25
Packing, endless, "Lewis," 4½-inch,	.15	No. 8 "Whitney" Round Wrench,	.50
Packing, endless, "Whitney," 4-inch,	.08	No. 9 "Whitney" Bed-Plate,	.25
Packing, endless, "Whitney," 4½-in.	.08	No. 10 "Whitney" Bed-Plate Wrench,	.50
Packing Strip, "Whitney,"	.05	No. 11 "Edson" or "Crane" Top	
REGULATOR, gas, No. 4 Lewis,	4.00	Wrench,	.25
Regulator, gas, No. 4A Lewis,	5.25	No. 14 "Edson" Stuffing-box Wrench,	.15
Regulator, gas, No. 2,	10.00	No. 17 Flask Wrench, old pattern,	.15
Regulator, time, No. 1,	4.00	No. 17A Flask Wrench, new pattern,	.15
Regulator, time, No. 2,	5.50	No. 19 Overhang. Bed-plate, 4-inch,	.75
Regulator, coil pipe siphon, alone,	.35	No. 19A Overhang. Bed-plate, 4½-	
Regulator, No. 2, N. P. siphon, alone,	1.25	inch,	.75
Regulator, gas, outlet tube,	.35	No. 19B "Crane" Spanner Wrench,	.15
		No. 20 "Lewis" Pot Lifter,	.15
		No. 21 "Lewis" Wrench,	.25

IMPORTANT NOTICE.

When Heating Apparatus is omitted, \$1.00 only will be deducted from list price of Vulcanizers. For Flasks, 80 cents for each Flask omitted. No deduction will be made when Vulcanizers are ordered "less wrenches."

... REPAIRS ON ...

VULCANIZERS AND GAS REGULATORS.

EVERY part of a Vulcanizer received for repair is taken apart, thoroughly cleaned and inspected, and if any part is found badly worn or imperfect, it is replaced by a new part, as we make it an imperative rule never to use any defective part of a Vulcanizer that may in a short time be the cause of complaint or of a serious accident.

Dentists sometimes think new parts are not required and consequently object to the expense, but our experience in the manufacture of Vulcanizers warrants us in putting so dangerous an implement as a Vulcanizer in perfect repair—which cannot always be done with old parts—regardless of objections from persons inexperienced in steam pressures: consequently the cost of repairs cannot be estimated without examination; therefore we would call attention to the following suggestions, that we may act intelligently in giving estimates:

We must insist on having all parts of a Vulcanizer sent us for repairs.

Dealers and Dentists will save themselves much annoyance, delay, and at times additional expense, by observing the above rule. All Vulcanizers, after being repaired, are thoroughly tested, no matter how trivial the repairs have been, and unless we have all the parts we can not be sure that the repaired Vulcanizers are steam tight, and in a satisfactory condition.

In every instance, send Cap, Thermometer and Pot. This rule also applies when a Gas Regulator is to be fitted to a Vulcanizer.

When sending Gas Regulators for repairs it is important that the coil pipe, used for connection to Vulcanizer, should also be sent, as in many cases the only trouble is a stoppage of this pipe with rust. All Vulcanizers and Regulators are thoroughly tested before being returned to the owner.

The prices herein given are for the new parts furnished. An additional charge will necessarily be made for removing old parts and preparing for the reception of new parts, and for attaching them.

Owner must pay transportation charges both ways.

PRICES FOR REPAIRS.

LEWIS CROSS-BAR VULCANIZER,
4-INCH.

Packing, testing and cleaning,	\$ 1.50
New cross-bar,	3.00
New bolt and nut,	1.00
New cap, less all trimmings,	3.00
New No. 1 pot, 4-inch, with iron ring,	9.00
New No. 2 pot, 4-inch, with iron ring,	10.00
New No. 3 pot, 4-inch, with iron ring,	11.00
4½-inch pots, \$1.00 advance.	

When old iron ring is used, deduct \$3.00.

Old rings must be sent to factory to be forced onto pot.

WHITNEY VULCANIZER,
4-INCH.

New mercury cup,	\$0.25
New No. 1 pot, 4-inch,	6.00
New No. 2 pot, 4-inch,	7.00
New No. 3 pot, 4-inch,	8.00
New cap, less trimmings,	5.00
Packing, testing and cleaning,	1.50
4½-inch pots, \$1.00 advance.	

Whitney Vulcanizer parts are not interchangeable and new parts must be accurately fitted. Send all parts of a Whitney for repair.

HAYES VULCANIZER, 4-INCH.

New screw collar,	\$3.00
New cap, less trimmings,	3.00
New cap, with safety valve and blow-off,	4.75
New set screws, per set,	.25
Packing, testing and cleaning,	1.50
New No. 1. 4-inch copper pot,	6.00
New No. 2. 4-inch copper pot,	7.00
New No. 3. 4-inch copper pot,	8.00
New No. 1. Iron clad pot, with copper lining,	8.00
New No. 2. Iron clad pot, with copper lining,	9.00
New No. 3. Iron clad pot, with copper lining,	10.00
New No. 1, No. 2 or No. 3. Iron clad pot only,	3.00
New No. 1. Copper lining,	6.00
New No. 2. Copper lining,	7.00
New No. 3. Copper lining,	8.00
New brass ring on copper pot,	2.00

EDSON VULCANIZER.

New pot,	\$8.00
New ring brazed on pot,	3.00
New pressure screw,	3.00
New connecting socket,	1.00
New stuffing-box stud,	1.50
New stuffing-box nut,	1.00
New stirrup rod,	1.00
New stirrup plate,	2.00
New stirrup rod nut,	.25
New cap, less trimmings,	7.00
Stuffing-box packing, per set,	.10
Cap packing, endless, each,	.08
Packing, testing and cleaning,	2.00

CRANE VULCANIZER.

New Pot,	\$8.00
New ring on pot,	3.00
New set springs,	1.00
New pressure screw,	3.00
New stuffing-box nut,	2.00

New pressure foot,	\$1.00
Stuffing-box packing, per set,	.10
Cap packing, endless, each,	.08
Packing, testing and cleaning,	2.50

B. D. M. Co.'S OLD STYLE CROSS-BAR VULCANIZER, 4-INCH.

New Cross-bar,	\$3.00
New No. 1. Pot only,	6.00
New No. 2. Pot only,	7.00
New No. 3. Pot only,	8.00
New iron ring,	3.00
New bolts and nuts, each,	1.00
Packing, testing and cleaning,	1.50
New cap, less trimmings,	3.00
4½-inch pots, \$1.00 advance.	

GENERAL REPAIRS.

Packing, testing and cleaning the Whitney, Hayes, Lewis or B. D. M. Co.'s Cross-Bar Vulcanizers,	\$1.50
New thermometer tube and scale,	.60
New thermometer scale only,	.25
New blow-off,	.75
Blow-off stud or Cap, each,	.38
New safety apparatus,	1.00
Safety stud or cap, each,	.38
Manifold body, less valves,	1.50
Manifold with valves,	3.25
Manifold screw,	.15
Mercury cup,	.25
Mercury in cup,	.25
New thermometer case, complete,	1.75
New inside thermometer case only,	.75
New outside thermometer case only,	.50

GAS REGULATORS.

Testing and re-setting gas regulators,	1.65
New outlet tube,	.35
New iron coil pipe,	.35
New No. 2 N. P. siphon,	1.25
New copper disk,	.25

TO PRODUCE PROPERLY VULCANIZED DENTURES.

EVERY Vulcanizer turned out by us will produce properly vulcanized dentures if intelligently handled. In other words, the product is not dependent upon certain mechanical features the Vulcanizer may possess, but upon the manner of procedure in vulcanizing. The variety of Vulcanizers offered merely permits a choice as to method of closing and other conveniences, but all are equally dependable so long as they are steam tight and the attachments in working order.

Time and temperature are the controlling factors: A short time at high temperature will produce brittle rubber and if the plate be thick, cause porosity. An apt illustration of the process of vulcanizing is found in the baking of bread. If bread be put into a hot oven and quickly baked it "raises" or expands; the quicker the oven the greater the "raising." The quick hardening of the surface and consequent confinement of gases bring about this result. A mass of rubber brought quickly to a high temperature "raises" or expands in precisely the same manner, and hence the porosity so often complained of and frequently laid to the vulcanizer.

Most manufacturers of rubber recommend raising the temperature to 320° in 20 minutes and holding it there 55 or 60 minutes. For plates of ordinary thickness these instructions will usually suffice, but better results are obtained by vulcanizing one and one-half hours at 290° or 300°, and in the case of thick plates three hours at 290° will do still better. Always allow at least 30 minutes for running the heat up to the vulcanizing point. The result should be a plate of the necessary toughness, elasticity and density.

If the mass of rubber is unusually thick, pack in pieces of old vulcanized rubber, filed all over to give them a rough, clean surface.

The Vulcanizer should be allowed to cool slowly. Never relieve the steam pressure by opening the blow-off.

Placing the Flask above the water line is also said to avoid porosity. In any event very little water need be used if the vulcanizer is tight. It is not necessary to cover the Flask with water.

The dentist whose laboratory is supplied with gas and fails to equip his Vulcanizer with a Gas and Time Regulator does himself an injustice and works at a disadvantage. A Gas Regulator can be set at any desired temperature from 280° to 320° and the Time Regulator is designed to hold it the proper length of time. Hence, with a Vulcanizer so equipped, time and temperature are under absolute control of the operator and may be varied to meet the requirements of each particular case. The absolute uniformity of temperature maintained by the Gas Regulator also tends to assure the best possible product.

In conclusion and to reiterate: The Vulcanizer must be steam tight; the Thermometer, Regulator and other adjuncts for its control in proper working order. By then following the hints here recorded from experience, plates should invariably come through tough but elastic and dense, taking a high finish. In the event of trouble look to the method of procedure, as something is more likely to go wrong with that than with the Vulcanizer and attachments. When these require attention it is made manifest in other ways easily recognized as mechanical faults.

BUFFALO DENTAL MANUFACTURING CO.

Catalogs of Our Manufactures.

- CATALOG A. Dentists' Appliances.
- CATALOG B. Chemical Laboratory Appliances.
- CATALOG C. Vulcanizers and Appurtenances.
- CATALOG D. Dental Laboratory Implements.
- CATALOG E. Automatic Pluggers and Points.
- CATALOG F. Nitrous Oxide Gas Apparatus.

Catalog B is not supplied to dentists, as it does not list appliances used by them.

In sending for catalogs, write on your own letter-head or inclose business card.

Every article in this catalog is very plainly described, either by figure number, regular number, or name, and we beg our customers not to cut or tear out any of the pages, as it mutilates the whole book and destroys it for reference. Refer to the article desired by name and page in this catalog, also giving catalog number of article. This is Catalog C, 1908.

**Buffalo
Dental
Manufacturing
Company.**

Buffalo Dental Manufacturing Co.

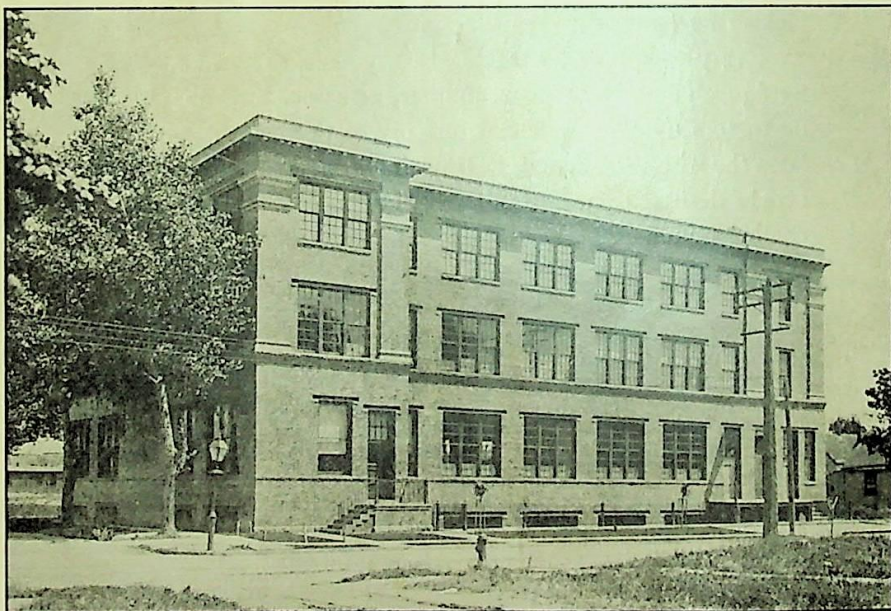
Nos. 587 and 589 Main Street,
BUFFALO, N.Y., U.S.A.

Sole
Manufacturers
of

**FLETCHER'S
LABORATORY
APPLIANCES**

Original
Manufacturers
of

**AUTOMATIC
PLUGGERS and
DENTAL
VULCANIZERS**



Factory and Wholesale Department, Kehr Street, corner Urban.

VISITORS ALWAYS WELCOME.

Machinery operated with Electric Power generated at Niagara Falls.